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INDIA RUBBER WORLD

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Edited by HENRY C. PEARSON—Offices, No. 150 Nassau Street, NEW YORK.

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FEBRUARY 1, 1903.

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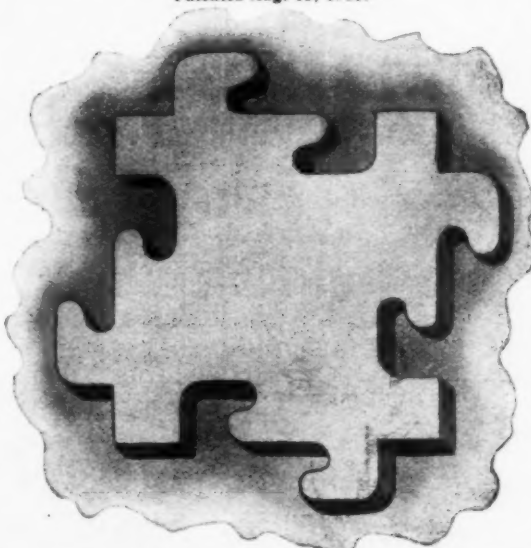
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TRANSATLANTIC WIRELESS TELEGRAPHY.

MARCONI'S recent feats in sending wireless messages across the big pond may be considered as a demonstration of the possibility of commercial competition with the cables, but they are still far from settling the result of such competition. To those who followed the results obtained during the long cruise of the *Carlo Alberto* last summer, the great Italian's latest exploits have brought little surprise, but their practical significance is quite another matter. It was found last summer that the long distance feats were far from easy of accomplishment, and the famous message to the king of Italy sent from Poldhu and received near Spezzia was pounded into the ether for two days or more at frequent intervals before it was finally picked up. And nobody yet knows just how long it took to get through the messages from Cape Breton and Cape Cod to the station at Poldhu. Now the doubt thus raised may mean much or little. If the difficulty is simply lack of power in the sending apparatus, or of sensitiveness in the receiving apparatus, it is likely to be quickly overcome, while if produced by adverse meteorological conditions it may persist indefinitely. Weather, in the ordinary sense of the word, appears not to interfere with wireless telegraphy, but the same immunity cannot be assumed in the case of great local differences in the electrical condition of the upper atmosphere. It is certain that wireless telegraphy has scored some wonderful successes, but it has also scored some dismal failures, as in the attempt of the Marconi people to undertake wireless work for the United States signal corps during the maneuvers in Long Island sound last summer.

Whatever may prove to be the cause of the troubles which have been experienced, it seems certain that syntonism working, on which the large commercial future of the system depends, has not yet been reduced to practical form. We hear much of what is about to be done in this line, but results are wanting. Without syntonism very few stations can simultaneously engage in long distance work, and while in theory syntonism is quite possible, in practice it may prove to be enormously difficult to secure and maintain. Even if secured, the etheric lines can be very easily tapped, as the receiver at any point is capable of being tuned to catch the messages, so that it is safe to say that sending in code will be necessary to secrecy. This is quite customary in cabling, and is not a serious matter save in certain classes of press messages. A graver difficulty lies in the speed of sending. With the large amount of energy which is now and probably always will be necessary in long distance wireless telegraphy, fast sending is extremely troublesome. We do not know the speed attained in the recent work, which is wrapped in a fog of secrecy, but the messages sent last summer to the *Carlo Alberto* are known to have been sent at a rate of less than five words per minute. Of course we are now only at the threshold of wireless telegraphy, and it is somewhat rash to predict its limitations, but we are disposed to think that the cable companies will not have to shut up shop for a long time to come. We earnestly hope that wireless telegraphy will score a commercial suc-

cess, for even if it prove inconvenient for long distances, it is a valuable addition to the world's means of communication, and as such should be welcomed.

As regards its effect on the business which is always our nearest interest, we have no fears. If the Marconi system provokes severe competition with cables, business will be better rather than worse. Competition is sometimes unpleasant, but it is immensely productive of improved methods and apparatus. We know well how the art of cable making has progressed, but we feel certain that between the cable of the present and the cable of the future there is a prodigious gap. Some day fast automatic sending will be in regular use on long cables, and the livelier the competition the sooner that day will come. Old and inefficient cables will be replaced by better ones, and all the skill of the cable builder will be called into play to hold up the cable end of the fight. With increased cable efficiency will come lower rates, and an enormous increase in the volume of business, demanding steadily larger facilities. Twenty years ago people were predicting that the telephone would soon make an end of the telegraph business, but on the contrary the telegraph service has grown better and more extensive year by year. We are now facing similar conditions with respect to wireless telegraphy and cables. The former is not one whit more startling and revolutionary than the telephone. It shares with the telephone the material disadvantages of sensitiveness to small disturbances and lack of secrecy and has not the compensation of great speed of communication. We believe that wireless telegraphy will find for itself a sphere of great and permanent usefulness, but that it will push the cable to the wall seems far from likely. There is room enough for both systems in the world's work, and so far as the insulation business is concerned, it has directly or indirectly been the gainer by every new application of electricity to the service of man.

AUTOMOBILES AND TIRES.

NOT only has the automobile proved its great utility in America, for purposes of pleasure and business, but the success attained by manufacturers here renders it no longer necessary to go abroad for really good machines. The recent notable exhibition of the new vehicles in New York alone afforded evidence of a widespread popular interest in automobilism that should go far toward stimulating the new industry in the United States.

The demand has begun on a large scale for motors as pleasure vehicles, in the ordinary sense; for touring purposes, a new interest on this side of the Atlantic; for racing, a feature which is certain to be promoted largely in a country so generous as this in the encouragement of sports; and for the manifold commercial uses for which a field appears open in large and small cities alike. The automobile has been found desirable for these various purposes, its use has been proved economical for many of them, and as for the purposes for which only the well-to-do can afford to own them, this class happens to be so large as to make a good demand possible.

Nor is the interest in the new vehicles to be regarded as a mere fad, or passing fancy. The automobile possesses innumerable advantages in comparison with the bicycle, for instance, to fit it for a permanent place in the affairs of daily life, and the bicycle has by no means been retired from trade, even though the widespread cycling craze of a few years ago has passed. The automobile trade seems founded upon a solid basis than was the bicycle interest at the outset, and it appeals to a more substantial, more serious, and more varied popular interest. It may be idle to talk about the disappearance of the horse; doubtless there will always be room for both horses and motor vehicles. But for many purposes the self-propelling vehicles will prove superior to horse-drawn ones, as was the case when the locomotive displaced the old stage coach, and later when electricity drove horse cars from city streets.

The interest of this important new development to the India-rubber trade lies in the necessity for resilient tires for every motor vehicle used, of whatever type, and only the rubber manufacturer can supply these. The perfect rubber tire has not yet been produced, just as a perfect automobile has still to be made, but both vehicles and tires exist that perform their service well, under conditions that make their manufacture profitable.

It is perhaps not too much to say that no single industrial development in the past has ever opened so great a new field for the rubber industry as the coming of the automobile. At the same time, the extent and the character of the new demand for tires afford an incentive for effort in the direction of their improvement that may yet bring reputation and wealth to some rubber man in a degree not exceeded in the rubber trade hitherto.

THE CAPACITY OF THE RUBBER INDUSTRY.

WE have received a letter from a member of the trade, taking exception to a statement contained in the last *INDIA RUBBER WORLD*, in regard to the productive capacity of the industry being greater than the normal demand for rubber goods. Our correspondent adduces facts, such as the recent expansion of long and substantially established rubber factories, in support of his argument, and also intimates that the publication of such statements as the one referred to are calculated unnecessarily to discourage the growth of the industry. We may mention that through no other source has so much information become known regarding the extension of rubber factories and the erection of new factories within the past two or three years as in the columns of *THE INDIA RUBBER WORLD*. But at the same rate of growth it would not require many years to give the United States ten times the rubber factory capacity required to supply its actual needs.

There has been, since the period of financial depression referred to in our recent editorial, a very material growth in the demand for rubber goods, but the rate of growth was greater during a portion of the time than could reasonably be expected to remain permanent, as was pointed out in these pages, for the reason that the whole country was, so to speak, "short" of rubber goods, and railways

and industrial plants generally had to replenish their equipment of rubber supplies, besides which manufacturers, anticipating a marked improvement in business conditions, set to work to create larger stocks for their selling depôts. During the second year after the improvement in trade the American consumption of rubber experienced a falling off, but during 1902, as shown on another page of this paper, the consumption reached practically as large a figure as in the exceptional year referred to, and from present indications a still larger consumption may be expected during the present year.

The fact, however, that any one manufacturer or any dozen may show a rapid growth in business, year after year, does not prove that there is unlimited room for the establishment of other plants, and we should deem it unwise for a journal representative of the trade to encourage every man competent to establish a new factory to make haste to do so, simply because the conditions of the trade appear now to be unprecedentedly favorable. Those concerns which have so largely extended their facilities during the past two years have been building in part for the future, and not because all the space in the new buildings and all the capacity of their new machinery is actually needed at this moment.

But we fail to see why any of the above considerations should necessarily presage failure for a rubber factory just starting, or yet only under contemplation. The first rubber factory ever established had a greater capacity than was required by the then existing demand for rubber goods, and there has been no time since when the combined capacity of the rubber plants in this country, worked constantly to the limit, could not have supplied largely more goods than the people of the country were prepared to buy at prices high enough to yield a profit. No such consideration, however, deterred Mr. Converse from building up the Boston Rubber Shoe Co., or prevented the establishment of the Hood Rubber Co., or The B. F. Goodrich Co., or any number of other comparatively new concerns in the various lines of the industry whose success is universally admitted. There is always room in the rubber industry for the best man, with the best manufacturing and best selling methods, and an assured success for such a man, just as there is always a competency in the legal profession for exceptional ability, without regard to the number of briefless lawyers.

There are just as good chances in the rubber trade today as ever existed, but they depend upon the caliber of the man who essays to seize them, and not upon the number of people already in the field, or their capacity to make goods if they only had the orders.

A CENSUS OF RUBBER PLANTING.

ON another page will be found the first result of an inquiry, begun by THE INDIA RUBBER WORLD, into the extent of rubber planting. The details which appear in this issue relate alone to planting in Mexico, and are based upon details supplied to us in confidence over the signatures of officials of twenty-six incorporated com-

panies. Obviously we have not been in a position to verify the reports made to us, but as the companies referred to get no advertising out of this showing, it cannot be seen that they could have an object in making other than accurate reports. It is none the less proper to say that THE INDIA RUBBER WORLD accepts no responsibility for the figures given. From informal reports which have reached us, with regard both to other incorporated companies and the numerous private planters on a small scale in Mexico, it may be estimated that the extent of their planting has been 25 per cent. or possibly 50 per cent. as great as that of the companies reporting to us.

These reports cover the whole experience of the several companies making them, and it is evident, from the nature of things, that mistakes must have been made and that not all the planting that has been done will prove successful. At the same time, all the planters in Mexico have had an opportunity to benefit by the experience of the pioneers in the field, and it is noteworthy that almost without exception the companies upon which we report are making preparations for extending their work. For example, nineteen companies report having in nurseries twice as many seedlings as the whole twenty-six companies embraced in our summary have planted since going into business.

The reader will be struck by the fact that so many trees have been planted to the acre. It would seem that a permanent growth of more than 200 trees per acre would be excessive, and yet the average planting last year was three times this figure. When land has once been prepared, however, the planting of trees is not expensive, and the sooner the new rubber trees can be made to cover the ground so closely as to discourage any other growth, the sooner the planters will be relieved of any expense in keeping the ground clean. Besides which, most of the planters entertain the hope of being able by some means to extract enough rubber from the surplus trees, when the time comes for their removal, to offset to an important extent the cost of upkeep of the plantations to that time.

We hope later to present a fuller summary of the progress made in planting in Mexico, as well as in other countries. While our present figures are lacking in completeness, they doubtless will prove of interest in indicating that rubber planting already has attained such important dimensions. Besides, the details given as to the relative preferences for planting in sun or shade, and planting from nursery or at stake, now made public for the first time, should also be of interest.

THE DISCOVERY OF VULCANIZATION.

THE Lynn (Massachusetts) *Item* contributes to history one more version of the discovery of vulcanization by Charles Goodyear: "We have the story from an intimate friend of the inventor that it was his custom to carry about with him a piece of rubber that he had been experimenting with. He had it in his hand one cold morning, when he visited the village store, and to get some warmth he extended his hands to the stove, when the piece of rubber touched the hot metal. This gave to Goodyear the desired hint and he followed out the suggestion and attained his end."

CANADIAN RUBBER TRADE BANQUET.

THE successful annual meeting of the Rubber Footwear Manufacturers' and Jobbers' Associations at Montreal was fittingly terminated with a complimentary banquet tendered to the visiting delegates by the Montreal rubber shoe trade, at the Windsor Hotel, in that city, on the evening of January 20. Forty-five guests were seated around a horseshoe shaped table, in the "Ladies' Ordinary," which was tastefully decorated for the occasion. The menu card was an appreciated memento of the dinner. Appropriate proverbial couplets interspersed the toast list, which was embellished with laughable caricature sketches of prominent members of the manufacturing concerns and officers of the jobbers' association. The chair was occupied by Mr. James Robinson, with credit to himself and to the satisfaction of the guests.

The first toast—"Our King"—was responded to by a hearty rendering of the national anthem. The next toast—"Our Country"—was responded to by Mr. S. H. C. Miner, of the Granby Rubber Co., who contrasted the favorable conditions now existing in the rubber business in Canada with those of five years ago, the change having been brought about by the coming together in friendly discussion of competitors in business. Going back further, he reviewed the history of progress in the Dominion and gave expression to the most hopeful views with regard to its future. Canada, he said, occupies the central position of the British empire, and indications justify Canadians in thinking that in less than a century this country will be the most important part of that empire. Speaking of the United States, Mr. Miner said that formerly Canada had desired reciprocity with the republic, and her representatives had made many futile trips to Washington in this connection; now the States seem to be getting ready to ask for reciprocity.

The toast to the Rubber Shoe Manufacturers' Association was responded to by Messrs. H. D. Warren, of the Gutta Percha and Rubber Manufacturing Co., D. L. McGibbon, the new manager of the Canadian Rubber Co., and R. H. Greene of the Maple Leaf Rubber Co. The toast to the Rubber Jobbers' Association was responded to by Messrs. Alexander MacPherson, Charles Bonnick, J. J. Kilgour, and Arthur Congdon.

In response to the toast "American Rubber Interests" Mr. Charles H. Arnold, of New York, was asked to speak. He regretted the absence of Governor Bourn, whom he considered one of the best informed of rubber men, and who was personally associated with the late Charles Goodyear in some of his rubber experiments. He also regretted that owing to a death in Mr. Pearson's family, the editor of THE INDIA RUBBER WORLD found it impossible to be present. He agreed with Mr. Miner in regard to the possibilities of this country, having recently been across the continent with this gentleman, and could realize the extent of the Dominion's heritage.

Responding to the toast to the "Allied Trades," Mr. E. Tetrault, representing the shoe manufacturing trade, expressed the hope that the rubber manufacturers at their session had discussed the tariff question, and he thought that the rubber and leather shoe branches should aid each other in having the tariff on footwear raised. Responding to the same toast, Mr. James Acton, editor of the *Canadian Shoe and Leather Journal*, said that the retail shoe trade is now the only branch of the business in Canada without an association, but that there is a growing tendency among the retail trade to get into line in this respect. He stated that the *Journal* management had commenced in its columns an agitation for united action in the matter of regulating prices, and other matters of interest to the retailers.

After a song by Mr. Woodley an anonymous contribution was read by the Chairman, as follows:

THE JOBBER'S SOLILOQUY.

To cut, or not to cut; that is the question:
Whether it is better in the mind to suffer
The loss of orders and those old accounts,
Or to take arms against a sea of rumors
And by a discount end them. To cut, to break;
No more; and by that stroke to say we end
The heartache and the thousand daily shocks
Jobbers are heir to, 'tis a consummation
Devoutly to be wished. To cut, to break;
To break that dread agreement; aye, there's the rub.
For in that break what pangs may come
When we have forfeited our good hard cash
Must give us pause: There's the respect
That makes the plunge of so much danger rife.
Else who would bear the kicks of traveling men,
Retailers' taunts, competitors' crooked ways,
Punching of goods and other measly fakes
The Patient Jobber on small margin takes,
When he himself might a hiatus make
With but a discount: Who would swallow dirt
And grunt and swear under such dire restraint
But that the dread of something afterwards—
That lost five hundred—puzzles the will
And makes us rather bear loss those ills we have
Than fly to others that we know not of,
Thus boodle does make members of us all,
And thus the bend of natural inclination
To give an extra "Five" or punch good "firsts."
To date ahead or monkey with the terms
With this regard finds its strong currents turn awry
And lost in dumb paralysis.

The remaining toasts, to "The Press," the health of the Chairman, and the "Wholesale Shoe Association," were appropriately responded to, after which the evening concluded with the singing of "Auld Lang Syne."

Among the letters of regret read at the banquet were two from the United States, from Henry C. Pearson, of THE INDIA RUBBER WORLD, and Augustus O. Bourn, president of the New England Rubber Club. Governor Bourn wrote: "I feel personally that I shall miss an opportunity which I may never have again, of meeting so large a number of the rubber boot and shoe jobbers of Canada. I feel a greater interest perhaps in that association from the fact that the first boot and shoe business of Canada was founded by my father, in Montreal, about fifty years ago. The firm of Brown, Hibbard and Bourn & Co. built the factory now owned by the Canadian Rubber Co., and I myself spent a few months in Montreal assisting my father, who had charge of establishing the business."

AMONG THE INVENTORS.

AN English patent (No. 15,058—1901) granted to J. E. Baxter relates to the manufacture of seamless rubber articles, such as balls or syringe bulbs, and also tire tubes, by dipping or building up rubber upon a core which may afterward be removed in a semi-liquid, plastic, or disintegrated state. A core molded from a mixture of 95 parts of Paris white and 5 parts of French chalk is mentioned, the same to be softened after the vulcanization of the goods by placing the whole in boiling water to soften the core.

No. 15,621—1901, granted to J. Thame relates to waterproof compositions for floor coverings or wall decorations, formed by mixing in certain proportions and under heat Pontianak gum (gutta-jelutong) with a binding material such as waste cotton or jute fiber, with the addition of a hardening substance, like zinc oxide, or a filling material, such as wood meal. To increase elasticity, Accra flake or oxidized oil may be added. The hot mixture may be passed through rolls to produce a plain or ornamented sheet, which may be dyed when cold, and a backing of paper or linen may be applied.

THE INDIA-RUBBER TRADE IN GREAT BRITAIN.

By Our Regular Correspondent.

ONE of the leading rubber clothing manufacturers in London, with whom I was recently in conversation, expressed the opinion that the state of depression experienced during the past year in this branch was not at all likely to prove evanescent. The position of affairs ruling ten years ago with regard to macintoshes for the million was not in his opinion ever likely to recur. The rapid means of transit now afforded in our large towns by the electric car was, he thought, one cause for the decline in the use of the macintosh, the rainproof garment having been found more generally serviceable for town use. The trade in high class sporting coats had not appreciably declined, he said, but this class of work only kept occupied the spreading machines of a limited number of firms whose reputation was securely founded. It certainly seems a somewhat curious and disquieting sign of the times to see goods exposed in retail rubber establishments bearing prominent labels to the effect that rubber does not enter into their composition. Of course it would not be much exceeding the limits of strict truth if a good many other so-called rubber goods of the day were likewise described, but then one hardly expects details of the sort to be exhibited under the signboard of the So-and So rubber company. This decline of the macintosh will naturally affect the British rubber manufacturer to a much greater extent than his competitors on the Continent or in America, as this country has had a home demand in the past far exceeding that of other nations where the rubber industry has established a firm footing. It would no doubt prove interesting to our proofers to hear something about the trend of the rubber clothing trade in the United States.

A JOINT patent recently taken out by Messrs. Charles Macintosh & Co., Limited, and Mr. A. E. Walker, their sub manager, has for its subject what is really a novelty, which cannot exactly be said of everything issued from the patent office in connection with tires. It has been sought in this case to secure the channels through which the circumferential wires pass, from liability to split transversely, which object is satisfactorily attained by lining the holes with canvas or other strengthening material. And not only are the holes thus lined but the canvas is extended from one hole through the body of the rubber to the other hole, the mutual support thus obtained adding greatly to the value of the original conception. Undoubtedly great annoyance has been caused in the past through failure of the unprotected sides of the holes to resist sudden pressure, and this further proof of Mr. Walker's expert knowledge of matters relating to solid tires will certainly be appreciated by buyers thereof.

THE recently issued tender forms for the condemned stores of the general postoffice do not show the decline in the quantity of Gutta-percha on offer that has been predicted from the increased use of paper insulation. The amount of Gutta-percha on offer is 41 tons, and it is noticeable that the price per pound for sample lots is fixed at 4 shillings, instead of the 3 shillings which has figured in recent tender forms.—I notice that included in the arrangements for the forthcoming visit of the Institution of Electrical Engineers to north Italy, in April, is a visit to the rubber and cable

works of Messrs. Pirelli & Co. (Milan).—It has not been generally known of what the Bitite insulating material used so largely and successfully by the Callender Cable Co., of Erith Kent, consisted. It was supposed to be a natural bitumen of the Trinidad type; speculation, however, has now been rendered superfluous, as it is stated by Dr. C. O. Weber, in his recently issued volume on "The Chemistry of India-rubber," that it is composed of stearine pitch, which has undergone a sort of vulcanization with sulphur. With regard to these Callender cables, electricians responsible for house wiring seem to be somewhat afraid of introducing them indoors from their alleged inflammable nature. I cannot gather that house fires have been traced to this source, though there seem to be instances of fires in mains insulated with pitch and which have become overheated.—I hear that the Liverpool Electric Cable Co., a firm of recent foundation, have attracted the favorable notice of buyers by the superior finish which their products show; a coat of varnish does not necessarily testify to inward value, but there is no doubt that an attractive appearance has a good deal to do with successful sales.—W. T. Glover & Co., Limited, of Trafford Park, have issued a well got up diary for the year, with information of various sorts useful to station engineers.—Despite the assurances of Sir William H. Preece and others that the Marconi system of wireless telegraphy can only have a limited application, there seems to be a growing fear amongst shareholders of the great cable companies that trouble is in store for them. The next few months will undoubtedly prove an anxious time, as it is felt that the full scope of the new system must shortly be clearly demonstrated.

MAJOR NATHAN, the governor of the Gold Coast Colony, has recently been in England and has had a good deal to say about its prospects. I have not seen his reports to the colonial office, these being more or less of a confidential nature, but a friend who has recently returned from employment out there tells me that the position of the rubber trade has largely engaged the governor's attention. Compared with the German-African possessions, there is very little government initiative in developing resources, it being considered the correct thing to leave all such initiative to the private trades. At present there seems room for improvement in the organization of the rubber industry. The falling off of exports in recent years from some of our West African possessions seems to be attributable not so much to the scarcity of labor as to the destruction of the trees in the coast districts. The Gold Coast rubber now has to come about an eight days journey through the bush, all having to be carried by the natives whose maximum load is about 100 pounds. The first railway in the colony is now being constructed through to Coomassie in Ashanti, and this will certainly tend to the development of the gold industry, if it does not also increase the output of rubber.

A CASE of similarity of title which undoubtedly tends to confusion seems to deserve a word of mention. Not long since this journal had a paragraph referring to the formation of the New York Wheel and Tyre Co. (New York) with a capital of \$150,000. With regard to this title I understand that the New York Wheel and Rubber Tyre Co., of 377, Kennington road, London, S. E., have lodged a protest, their title having been in existence for thir-

THE
WATERPROOF
TRADE.IMPROVEMENT
IN
SOLID TIRES.GOLD
COAST
RUBBER.SIMILARITY
OF TITLE.

teen years. Of course it may be urged that the wording is not identical in each case, but the similarity is great enough to cause confusion among customers, especially as in the case of firms whose titles run to several words, there is a general disposition to use a contracted form. With regard to the Kennington firm, they are about to remove the rubber manufacturing part of their business to Bendon Valley, Wandsworth, where special mills have been erected and a large plant has been put down. The Kennington premises will be retained for the purposes of fitting tires to wheels and for keeping a stock of tires. Count de Nevers, it may be mentioned, is the sole proprietor of the Kennington firm, and has taken a prominent part in the development of the solid tire industry.

I HEARD some time ago that Dr. Weber had perfected a new arrangement for the recovery of naphtha used in spreading,

RECOVERY OF SOLVENTS.

and now the details are before me of the patent No. 16,919—1901, granted to C. O. Weber and Isidor Frankenburg, Limited. The actual percentage recovered of the solvent used is not given, but it has been stated to be very high; so high indeed as to excite a suspicion of exaggeration. However, I hope to be in a position to speak more definitely on this point shortly. In the meantime it may not be uninteresting to say a word or two regarding what has been done in the past in this way, though it must be confessed that as the experience of firms who have adopted recovery plants has been somewhat jealously kept from public knowledge, one cannot affect to write with a great degree of precision. Many years ago the Leyland company had a recovery plant as had also Moseley's; that of the former firm has been abandoned while Moseley's have adopted a newer design and are stated to be obtaining satisfactory results. The plant designed by Mr. J. B. Price for a prominent Manchester firm was not an unqualified success, and as far as my knowledge the only plant that has been really successful is that made by Messrs. Siddeley, engineers of Liverpool, who have paid special attention to the subject. There are now several of these plants in rubber works and in card-clothing factories, an average yield of 45 per cent. of the naphtha used being recovered. Of course in the absence of figures relative to working expenses, the statement of the yield of naphtha is not of great value, but I understand that in all cases Messrs. Siddeley's plant, as improved in late years, is working at a good profit. In some cases the naphtha as recovered is fit for use over again without further treatment, while in others it is taken back again for distillation by the tar distiller at a reduction of a penny or two per gallon on the contract price. This point as to the purity of the product is one that should engage the attention of those who propose adopting recovery plant, all the more as with the improvements of late years there is now no difficulty whatever in obtaining the naphtha pure enough for use over again at once. What with the low prices that have ruled for some time in regard to solvent naphtha, it cannot be said that the present is an ideal time to bring out a new recovery machine, nor can it be contended that the profits of waterproofers during the last year have been such as to cause them to contemplate an embarkation upon new capital expenditure with equanimity.

WITH regard to the advertisements of a recently started reclaimed rubber company, astute people in the trade are wondering how it is that such rubber can be advertised as free from oil substitutes and sulphur, seeing that these components, or at any rate the latter two, are so widely prevalent in the waste rubber of the day. I am not attempting any reply myself, but am merely voicing the expressions of incredulity which have fallen upon my ears.

RECOVERED RUBBER.

What speculation I may have, however, allowed myself to indulge in seems to indicate that the advertisers have used an abbreviated form of expression and that the meaning they intend to convey is that none of the above mentioned materials are purposely added to their products.—With regard to recovered rubber generally, there seems to be far more of the black variety on offer than there is a market for. At the moment drab waste is rather in demand. Sometimes there is a rush on red waste and holders thereof can realize at a satisfactory profit, but as there is always the possibility of losses on other kinds at the same time the business cannot, in these days at least, be looked upon except as a risky and precarious one.

THE contrivance invented by Mr. H. Parsons, of London, to prevent side slip in motor car tires, has attracted special notice in the "society" as well as the technical press. It consists of two flexible wire hoops, one on either side of the wheel, the hoops being connected by steel chains passing zig-zag from one to the other around the tire. It will be possible to say something more fully about this invention when its capabilities have stood the tests to which they are about to be subjected.

SIDE SLIP PREVENTER.

MR. R. OPENSHAW has been appointed manager of the rubber works of Messrs. Capon Heaton & Co., Limited, of Stirchley near Birmingham. Mr. Openshaw has previously gained experience in the works of Charles Macintosh & Co., and George McLellan & Co. (Glasgow), and has also been connected with the Clipper Tyre Co.—The event of the closing month of the year has been the long-delayed appearance of Dr. C. O. Weber's volume on India-rubber. It will undoubtedly have a large circulation in the trade.—I notice that a section of the daily press is somewhat caustic about King Leopold's speech to the deputation of the Baptist Missionary Society. The opinion is expressed that a reduction of taxation on religious, scientific, and charitable institutions, though admirable in itself, would be more commendable if it was accompanied by reform in administration all round in the Congo Free State. The speech contained an interesting announcement to the effect that replanting of rubber trees is being regularly carried out in denuded areas.—Another publication relating incidentally to raw rubber which is being pretty widely read by the general public, is a volume by Mr. Perez Triana, entitled "Down the Orinoco in a Canoe." The account of the immense virgin forests of Pará rubber observed by the author is hardly likely to reassure investors in rubber plantations as to the value of their investments in the immediate future.

SHORT MENTION.

THIS company has been formed with a capital of £25,000 from the wreck of the Hyde Imperial Rubber Co., at Woodley, and circumstances indicate its having a successful career under the management of Mr. Dawes. The names on the directorate point to Preston capital being involved, to the exclusion of the Birmingham element which was so prominent in the defunct concern.

THE HYDE RUBBER CO. LIMITED.

AMAZON STEAM NAVIGATION CO.

TO THE EDITOR OF THE INDIA RUBBER WORLD: The directors of the Amazon Steam Navigation Co., Limited, announced on November 12 that the company's contract has been extended to July 31, 1910, subject to the approval of the Brazilian federal congress, and they have now received a telegram stating that the congress has given its approval of same.

G. STREET & CO.

30, Cornhill, London, December 26, 1902.

RUBBER PLANTING AND EXPLOITATION.

SUMMARY OF PLANTING IN MEXICO.

IN answer to a circular letter sent by THE INDIA RUBBER WORLD to the various incorporated rubber planting companies now operating in Mexico, asking for details regarding their progress, to be held in confidence except for use in making up statements of totals, responses have been received from most of the companies that have actually begun planting. From a few substantial companies the desired details have not yet been received, and in a few other cases the statements have not been made in a form to permit of their use in the computations which follow. The returns which appear in the table of total planting, below, are supplied by twenty-six companies. Of the companies referred to, one was incorporated in 1897, two in 1899, three in 1900, nine in 1901, and two in 1902; regarding the other nine we are not informed. It will be seen that the companies are mainly new, and some have done very little of the planting contemplated. Two, however, state that they have finished planting.

The total number of trees planted by the twenty-six companies, by years, is reported as follows:

Planted, 1897.....	5,200	Planted, 1901.....	1,101,678
Planted, 1898.....	21,700	Planted, 1902.....	2,991,000
Planted, 1899.....	370,785		
Planted, 1900.....	952,742	Total.....	5,443,105

The total acreage reported is 11,117. The acreage cannot be presented by years in some cases, but by partially estimating, from the returns supplied, it appears that about 5300 acres were put into rubber in 1902. Thirteen of the reports, in which exact details appear, give the following average number of trees planted per acre in that year:

400	1000	820	800	2000
500	200	800	587	600
496		250		611

These thirteen companies report a total planting of 2,671,000 trees in 1902, on 4113 acres, or an average of 650 trees per acre. It will be understood, of course, that the practice is general of close planting, both to allow for failures, and with the idea of extracting some rubber from the surplus trees when they have grown so as to make their removal necessary.

While some of the companies have tried various methods of planting as regards shade, generally one plan has been adhered to in each case, and further planting, as a rule, will be done under the same method as in the past. The distribution of the total planting to date has been as follows:

Planted in the open.....	3,202,920 trees
Planted in the open and semi shade.....	1,117,000 "
Planted in semi shade.....	1,019,185 "
Planted in shade.....	4,000 "
Not stated.....	100,000 "

Total..... 5,443,105 trees

Ten companies planted in the open, two in the open and semi shade, eleven in semi shade, one in shade altogether, and two fail to report.

Nine companies planted from nurseries and at stake, twelve from nurseries principally, three at stake alone, and two fail to report.

In regard to transplanting from nurseries, and planting seeds at stake, while the practice of the different companies varies, in most cases the plan adopted in the past will be continued. The total planting has been distributed as follows:

From nursery and at stake.....	2,075,400 trees
From nurseries alone.....	1,895,705 "
At stake alone.....	372,000 "
Not stated.....	100,000 "

Total..... 4,443,105 trees

To give an idea of the extent of the preparations made for future planting, it may be mentioned that nineteen of the twenty-six companies reported having in nurseries at the end of the season a total of 11,462,000 young plants, in numbers ranging from 7000 to 2,000,000 each. Two companies reported no nurseries, having completed planting, and five made no report.

CHACAMAS PLANTATION CO.

[Plantation on the rio Chacamas, department of Palenque, state of Chiapas, Mexico. Office: 1019 Royal Insurance building, Chicago, Illinois.]

INCORPORATED June 22, 1902, under the laws of Illinois. The company own 5000 acres of land, the development of 1000 of which it is proposed to begin this year under the designation "Series No. 1." The principal planting is to be rubber (*Custillia elastica*), though "short crops" will be planted at first, and attention may be given to sugar cane and fruits. The company's financial scheme embraces some novel features. They offer to the public fifty "development shares," or income certificates at \$5 each, amounting to \$250 per acre developed. Their contract with an investor is in the form of an option, on say 50 shares at \$5 each, to be paid for within fifty months. Upon each payment of \$5 the investor receives one share, and in case at any time he should cease making payments, the option will be held to have expired, but the investor will be in possession of all the shares for which he may have paid. In case of the death of any investor before the completion of all the payments provided for in his option, the remaining shares of the series will be issued to his heirs. The officers are: *Frank M. Luce*, car mileage auditor, Chicago and Northwestern railroad, president; *Richard Walsh*, of Walsh Boyle & Co., Chicago wholesale grocers, vice president; *Edward P. Skene*, general land commissioner, Illinois Central railroad, secretary; *George W. Speich*, of the American Trust and Savings Bank, treasurer; *F. R. McKinstry*, general manager. These gentlemen and six other business men of good standing in and near Chicago form the directorate. Mr. McKinstry and some of the directors were due to sail from New York on January 22 for the plantation, where it is planned this year to establish a nursery of 5 acres. C. E. Rickard is plantation manager.

JOLIET TROPICAL PLANTATION CO.

[Plantation at Tierra Blanca, state of Vera Cruz, Mexico. Office: Joliet, Illinois.]

INCORPORATED July 12, 1902, under the laws of Delaware; authorized capitalization \$360,000, in 1200 shares of \$300. The original holding of land was 1200 acres, but in December, 1902, an additional 2000 acres was purchased. These lands were acquired from Alfred Bishop Mason, of Chicago, who is president of the Vera Cruz and Pacific Railway Co., and is otherwise interested in Mexican development. It adjoins two extensive private rubber plantations—the "Yale," owned by Mr. Mason and conducted by his two nephews, Messrs. Trowbridge and Willis, and the "Esperanza," owned by two Englishmen, Messrs. Pearson and Leversley. This new plantation is the outgrowth of a club formed by 100 citizens of Joliet, with a view to investing in some rubber plantation, with the result that they determined to start a company of their own. The

officers are: *J. O. Burrett*, banker, president; *J. J. Allison*, school superintendent, and *George B. Carey*, merchant, vice-presidents; *T. A. Mason*, banker, treasurer; *J. F. Skeel*, clerk board of education, secretary; *James C. Dennis*, former street superintendent of Joliet, plantation manager. To investors are offered shares of capital stock at \$10 (par), to give them legal protection in the matters of ownership of the property and a voice in the management, and with each share an "income certificate," entitling the holder to his proportion in the net profits—the whole being sold for \$300, payable in installments, if preferred. It was reported on January 9 that about 900 shares had been taken, mostly by citizens of Joliet, many of whom had paid in full. One thousand acres of the company's lands are reported to be fine sugar lands, and most of the remainder excellent for rubber. Both crops will be planted, and, at the beginning, some "quick crops," besides which a company store will be maintained.

THE BACHAJON PLANTATION CO.

[Plantation on the rio Tulijá, department of Palenque, state of Chiapas, Mexico. Office: Witherspoon building, Philadelphia.]

INCORPORATED in April, 1902, under the laws of Maine; authorized capital, \$100,000, which is said to be fully paid. The company own 6177 acres, in the valley of the Tulijá river, some 18 miles from the town of Salto de Agua, and connected by water transportation with Frontera, on the Mexican gulf. Six hundred acres have been surveyed for the first development work, to be planted in rubber (*Castilloa elastica*), 600 trees to the acre, with a view to thinning out later to 200 trees. "Contracts for deed" are offered for sale at \$200 per acre, cash, or, \$264 in installments. On July 1, 1910, the company propose, upon the surrender of these contracts, to make a deed, conveying to the contract holders an undivided ownership of the property purchased by them. Officers: *Horace Mitchell*, Kittery, Maine, president; *W. T. Atkinson*, Kansas City, Kansas, vice president; *E. B. Fletcher*, Philadelphia, secretary and treasurer and general manager. The company's plantation manager was due to sail from New York on January 15, to begin the work of active development.

PLANTATIONS LACOURT (CONGO FREE STATE).

[See THE INDIA RUBBER WORLD, November 1, 1901—page 45.]

THE Société Anonyme Plantations Lacourt, a Belgian enterprise founded in 1899, with 800,000 francs capital, to exploit rubber in the Congo Free State, have been able thus far to report very favorable results. A comparison is given here of their earnings for three years, "Gross" profits relating to the proceeds from trading in native rubber, and "Net" profits what remained after meeting the expenses of the company's plantations:

	Gross.	Net.
Year ending March 31, 1900 francs	413,882.08	384,732.91
Year ending March 31, 1901	215,886.97	94,833.56
Year ending March 31, 1902	300,249.09	167,037.44

The latest report of the administration devotes, as did that of last year, no little space to the planting work done by the company, particularly in rubber. Following is a comparison of the extent of the plantations on March 31 of each year:

	1901.	1902.
India rubber (<i>Landolfia</i> vines) acres	877	1137
Coffee	148	153
Cacao	7	12
Other crops	—	25
Total acres	1032	1327

From the former of the reports quoted it appeared that about 900 rubber vines were planted to the acre, with the idea of attaining a permanent growth of 800. At the same rate, the planting up to March last would have amounted to 1,037,000

vines. The practice of the company is to replant, in case of failures. At the end of the business year their nurseries contained 300,000 rubber plants, besides coffee, cacao, and tea. As the wild vines do not average more than 2 per acre, scattered through dense forests, the company anticipate a great advantage from having a growth of rubber concentrated to the extent suggested above.

During the year the discovery was made, on the Lacourt concession, of trees of the *Kickxia* species which yields rubber in Lagos. While much of the concession had not been explored, the hope was entertained that *Kickxia* trees would be found in abundance, to the great benefit of the company. The concession of this company lies in the basin of the river Sankuru, an important tributary of the river Kassai, which in turn empties into the Congo. The latitude is about 4° south.

RUBBER PLANTING IN THE CONGO FREE STATE.

AN official decree dated January 5, 1899, required that companies collecting rubber under concessions from the state should plant annually not less than 150 new rubber trees or vines, for every ton of rubber collected during the year. A later decree, to take effect from January 1, 1903, provides that 500 such trees or vines shall be planted for each ton of rubber collected. In the annual review of the Antwerp rubber market for the past year issued by *Grisar & Co.*, it is stated that the operation of this law had resulted in the setting out of 410,000 rubber plants in 1899, of 500,000 in 1900, and 510,000 in 1901—a total of 1,420,000 for the three years. These decrees apply equally to the collection of rubber by employes and agents of the state, besides which there are other regulations for the planting of rubber under control of the forestry department, and it is estimated that in addition to the planting above referred to, 2,500,000 rubber plants had been set out on the public domain during the three years ending with 1901. These figures, added to the preceding, give a total of more than 3,900,000, to which must be added any planting done during 1903. It does not appear that these figures include the planting done by the Société Anonyme Plantations Lacourt, referred to elsewhere in this paper, and amounting up to March 31 last to more than 1,100,000, or an aggregate of planting in the Congo Free State thus far of about 5,000,000 trees, in addition to the figures for 1902, not yet available.

GUTTA-PERCHA AND RUBBER IN THE MALAY STATES.

THE policy, on the part of the authorities, of prohibiting the collection of Gutta-percha until better means have been devised for preventing destruction of the trees—mentioned in THE INDIA RUBBER WORLD, April 1, 1902 (page 211)—was maintained during 1901, for which year the official reports of the government have come to hand. The prohibition extended originally to the best species of Gutta-percha trees, known locally as "getah taban," but in the state of Pahang the collection of the inferior sorts of Gutta-percha is now prohibited as well. The result of this course is temporarily to deprive the government of a source of revenue from selling Gutta-percha privileges, but it is felt that, had this course not been adopted, the Gutta-percha trees would soon have disappeared.

In Negri Sembilan a Gutta-percha reserve of 2000 acres has been formed at Senawang, which was stated last year to contain 18,000 plants and live Gutta-percha stumps. The report now under review says that the work of cleaning the reserve has been continued during the year, and that more than 30,000 plants and stumps have been located and are now under protection.

It is mentioned that in the state of Selangor, European planters, at the end of 1901, had under cultivation 14,661 acres, of

which 7487 acres were planted in "Pará rubber." In Perak the government gardens supplied Pará rubber seeds and seedlings extensively to private planters, and experiments were begun in the cultivation of *Castilloa* and some African rubber species. Mention is made of the tapping, in August, 1901, of a few Pará rubber trees 12 years old, which yielded an average of 4 pounds of rubber, and of *Ficus elastica* of the same age, which yielded an average of 10 pounds per tree. These reports throughout refer favorably to the progress in rubber planting and express the belief that it will prove very profitable if anything like present prices of rubber should be maintained.

CONSERVATIVE RUBBER PRODUCTION CO.

[Plantation at Ystijja, department of Palenque, state of Chiapas, Mexico. Office: 319-320 Parrott building, San Francisco, California.]

INCORPORATED October 26, 1901, under the laws of Arizona; capital \$1,200,000, in shares of \$200. The company own 6670 acres of land, on the Tulija river, acquired from the Mexican government in July, 1901. Rubber only is to be planted, 600 trees per acre, to be reduced later to 200. Shares are offered, to be paid for in monthly installments, or at reduced rates for cash. No income is estimated before the end of the fifth year. The officers—John Ballard, president; Dr. O. V. Sessions, vice president; Byron Gilman, treasurer; J. S. Cannon, secretary and general manager—have long been engaged successfully in business enterprises on the Pacific coast, and Mr. Cannon has had several years experience in developing rubber plantations in Mexico. E. W. Graves, plantation director, is an experienced horticulturist.

ORIZABA RUBBER PLANTATION CO.

[Plantation at El Salto, state of Chiapas, Mexico. Office: No. 215 Dearborn street, Chicago, Illinois.]

THE first number of the *Chiapas News*, a periodical published by this company, contains a portrait and sketch of their plantation manager, Dr George B. Abbott, a native of Dixon, Illinois, born in 1856. During six years he lived in Honduras, engaged in merchandising and tropical planting, and acquiring such knowledge of tropical labor problems as to fit him for such a position as he now holds.

RUBBER PLANTING IN THE STRAITS SETTLEMENTS.

THE *Tropical Agriculturist* (September, 1902) says: "A little while ago Mr. H. K. Rutherford pressed us to try and obtain statistics of the area planted in rubber in the Straits, etc. It is a difficult matter to do so, as there are so many different states and districts embraced in the Malay peninsula. But from the returns given in the Singapore and Straits' Directory for 1902, which has just reached us, we venture to compile the following figures, simply as a rough approximation:

DISTRICT.	Area under Rubber,
British North Borneo.....	About 100 acres.
Johore.....	About 200 acres.
Negri Sembilan.....	About 678 acres.
Perak.....	About 540 acres.
Province Wellesley.....	About 100 acres.
Selangor.....	About 2,926 acres.

Total .. 4,544

"This is against 3356 acres in Ceylon. But our local returns are far more to be relied on than the guesses we have applied to the estates in the Straits, etc. It should be the duty of the Selangor Planters' Association to collect reliable returns of the actual extent of rubber planted on each garden or estate and so to correct the figures which we venture to put forward above."—[The figures given in this paragraph for Negri Sembilan should be compared with the detailed statement for the same province which appeared in THE INDIA RUBBER WORLD of November 1, 1902 (page 57). That showed an acreage of 592 planted to rubber alone, and a total acreage of 4294

planted to rubber in combination with either coffee or cocoa-nuts.]

MEXICAN PLANTING NOTES.

MR. A. G. WEISS, of Charleston, Illinois, whose private rubber plantation in the state of Tabasco, Mexico, has been mentioned in these pages, is understood to be arranging to plant 400 acres more in rubber this year.

—Mr. C. M. Kendall's contract with the Isthmus Plantation Association of Mexico (Milwaukee, Wisconsin) having expired on January 1—its shares having been practically all sold—he is organizing a new company, to be called the Mexico Batavia Plantation Co. A partially developed plantation has been secured in the state of Oaxaca, Mexico, on which there is already a considerable acreage of *Castilloa elastica*, besides some Pará and Ceará rubber trees, which he reports to be doing well. Mr. Kendall's address is Wells building, Milwaukee.

RAILWAY THROUGH ANOTHER RUBBER FIELD.

A DECREE of the Portuguese government dated November 27, 1902, grants to Robert Williams, a British subject, a concession to build a railway 1400 kilometers [=870 miles] in length, from Lobito bay, on the Angola seaboard, to Katanga, on the Eastern frontier of the colony, where connection can be made with the Cape to Cairo system. The *concessionaire* is required to deposit £100,000 as a guarantee that he will form a company with £2,000,000 capital, with its head office at Lisbon, and complete the railway within eight years from January 1, 1903. Angola is the extensive Portuguese possession south of the Congo river, from which is derived the Benguela, Loanda, and Ambriz grades of rubber. Of late years the export of these rubbers has declined, which fact is attributed in part to the exhaustion of the supplies near the coast, but more particularly to the better transportation facilities to and from the Congo Free State since the completion of the Congo railway. Angola is a fertile district, and with a railway it is believed that not only would the rubber trade revive, but the general development of the country would be promoted.

Katanga, mentioned above, is a province in the extreme southeast part of the Congo Free State, which of late has begun to be developed in an energetic way by a strong Belgian company. This province is exceptionally rich in rubber, from all reports, which fact may tend to encourage Mr. Williams's railway project. Mr. Williams, by the way, is an engineer in the service of a British concern east of Lake Tanganyika, and some time ago he informed the *Comité Spécial Katanga* that while journeying through their territory he had found important sources of gold. The committee have encouraged his further investigations, with results that have surpassed all expectations. This may prove to be a still further incentive to the building of the railway. All these details are mentioned for the reason that whatever tends to the opening up any rubber producing country is helpful in making rubber more accessible and in placing the production of rubber under more intelligent supervision.

The administration of the Cie. du Chemin de Fer du Congo (the Congo State railway) are reported to be about to invite tenders for the supply of a large electric installation and 30 electric locomotives, the latter to be employed on various small branch lines constructed to secure better communication with rubber producing districts. This railway, 241 miles in length, around the falls in the Congo river, between Matadi and Leopoldville, has now been in successful operation for several years. The net profits for the business year 1898-99 were 6,242,093.86 francs; for 1899-1900 they were 8,001,500.43 francs; for 1900-01 they were 7,778,397.90 francs. The capitalization is 30,000,000 francs.

THE RUBBER TREES AT TUXTEPEC.

TO THE EDITOR OF THE INDIA RUBBER WORLD: An article signed Frederic J. Haskins, dated City of Mexico, December 3, and published in the St. Louis *Globe Democrat* of December 14, 1902, seems designed to create a decidedly unfavorable impression in regard to rubber planting. This writer criticises the issuance of rubber planting prospectuses, guaranteeing extravagant profits, and so far as his letter is concerned one might infer that all rubber planting in Mexico is of a visionary character based upon false hopes. As for his facts, however, he gives some details regarding the collection of rubber on a plantation near the town of Tuxtepec which do not appear to support his conclusions. [An extract from Mr. Haskins's letter appeared in the last INDIA RUBBER WORLD.—THE EDITOR]. Mr. Haskins says: "If rubber growing would guarantee 10 per cent. on the investment—not to speak of 400 per cent.—there is enough idle capital ready and waiting in the United States to plant every acre of land suitable to its culture in the world, and it would not be necessary to advertise to get it, either."

The rubber belt of tropical Mexico lies at an altitude of from 200 to 500 feet, between the foot hills of the cordilleras on one side, and the low coast plains on the other. Its northern limit can be roughly placed at a point just south of Cordoba or Vera Cruz, and extends southward and eastward to the states of Tabasco and Chiapas, and is from 20 to 50 miles wide. Much of the land in this region, however, on account of the soil lacking proper drainage, and the nature of its constituents, is unavailable for successful rubber culture.

Here and there in years gone by, in all this entire region, planters of coffee and cacao have set out rubber trees as shade. These rubber trees were uncultivated and often planted under unfavorable conditions; yet in many instances they have proved a marked success. On the ride between Santiago Tuxtla and Palo Herrido the Indians will be seen to have rubber growing in their various coffee patches. The same is true in Acayucan, in the state of Vera Cruz, and in the valley of the Texeohoacan, and in the town of Tuxtepec, state of Oaxaca, every dooryard has vigorously growing rubber trees, some of them 50 feet high and 2½ feet in diameter, and yielding rubber.

Undoubtedly the rubber plantation to which Mr. Haskins refers is that of Señor Don Joaquin Jimenez, whose plantation is only one half hour's ride from the city of Tuxtepec, in Oaxaca. He is a gentleman of means, who, like other planters, uses these trees as shade for coffee. He has several thousand rubber trees that were never tapped until last year, when, as an experiment, he allowed a representative from a Vera Cruz commercial house to tap about 350 trees. The product was sold to these people on the plantation at 80 cents a pound, Mexican, the buyer doing all the work. No one has admitted that these trees were bled to their fullest capacity, yet a single tree produced, according to Mr. Haskins's statement, 12 pounds of pure rubber. The age of many of the trees was from seven to nine years, but they yielded 2 pounds of rubber to the tree.

Yet Mr. Haskins does not believe in rubber culture. The Vera Cruz house paid Señor Jimenez only 80 cents, silver, per pound, but the market quotation for Central rubbers at that time was from 45 to 54 cents gold, which, reduced to silver money, according to the rate of exchange used by Mr. Haskins, would give an equivalent of \$1.16 to \$1.38, silver, per pound. Mr. Haskins says that the rubber was clean, in which event 800 pounds should have sold at \$432, gold, but at the lowest quotations the price would have been \$360, gold, which is not so bad, when it is considered that 350 trees are less than

are planted usually on two acres. At the price paid to Señor Jimenez the net return was at the rate of \$365.60, silver, per acre—counting 200 trees to the acre. Estimated at the then current market prices for Mexican rubber, the same yield would have given a gross return of \$205.65 to \$246.78, gold, per acre. This is only for young trees. Not only would successive annual crops be gathered, but an annual increase in yield should be expected as the trees grow older. As already mentioned, some of the older trees in this case yielded 12 pounds of rubber.

I am not saying anything about the people who issue statements about the profits possible from rubber planting investments, or who are charging high prices for rubber lands brought to a state of income development. I do not defend any dishonestly conducted proposition; neither do I say that there are any dishonestly conducted rubber planting properties. I simply desire to state facts as they exist, and the *bona fide* investor can form his own conclusion.

It is an easy matter to verify the statements as to Señor Jimenez's plantation of coffee and rubber, also to visit the "Esperanza" and "Yale" rubber plantations, within one-half hour's ride from Tierra Blanca, on the Vera Cruz and Pacific railroad, where can be seen about 700,000 growing rubber trees, now from three to five years old. Experience shows that trees grown from planted seeds produce rubber as is usual in nature.

It should be stated that the price of Mexican rubber is low for the reason that up to this time the rubber sold is the product of wild trees gathered by the Indians, who take pains to increase its weight by adding sticks, stones, and dirt to make it weigh as much as possible. But properly prepared Mexican rubber sells at a much higher price.

J. J. FITZGERRELL.

City of Mexico, Mexico, December 26, 1902.

[THERE seems to be no doubt of the existence of Señor Don Joaquin Jimenez, the coffee planter near Tuxtepec, and of a considerable number of rubber trees on his estate. According to a report made by a neighbor of Señor Jimenez to THE INDIA RUBBER WORLD last summer, and quoted in our issue of August 1, 1902, there had been planted to that date some 10,000 trees. Our informant then stated, as a fact current in the community: "Recently he permitted some of his six and eight year old trees to be tapped by men sent to his place by a Vera Cruz trader, who extracted and cured about 700 pounds of rubber, for which they paid 80 cents, Mexican. The trees tapped yielded an average of about 1 pound per tree." In a newspaper article by Mr. Haskins, who presumably is not personally informed, he reproduces a statement from a mercantile house whose standing he vouches for, that their representative, in search of facts relating to rubber culture, had found a planter near Tuxtepec on whose estate 350 trees (a few of them twenty years old) had yielded 800 pounds of clean rubber. These two statements do not agree in detail, and there yet remains to be obtained a verified account of just how much rubber was obtained per tree. It is certain, however, that Señor Jimenez obtained less than the market price for his product, but he was relieved of the expense of preparing, shipping, and marketing the rubber. Considering that his trees are in shape for an annual yield for an indefinite period, and that there is now no longer necessary any expense for care of the trees, it would appear that if rubber planters generally can obtain anything near like so good results, they have a good business in prospect.—THE EDITOR.]

THE United States internal revenue department has issued an order permitting the use of a rubber stamp for cancellation of tax paid stamps for renovated butter. Hitherto such cancellation has been required to be made with a stencil plate.

A RESPONSE FROM DR. WEBER.

TO THE EDITOR OF THE INDIA RUBBER WORLD: In the last issue of your much valued Journal you are good enough to refer at some length to my book ["The Chemistry of India-Rubber. London: 1902] and to criticise its various features. And while I gratefully concede that your criticism, as far as it applies, is eminently fair, I feel at the same time constrained to say that it altogether exceeds the scope of my book, and the essential purpose of the present is to reduce to its true proportions the size of the target you have been aiming at.

At the outset you explain that "rubber manufacturers and their superintendents in most cases know little of chemistry, have a horror of theory, and only seek for an explanation of interesting phenomena when it appears profitable to do so." I am quite in agreement with you that this is a fairly accurate description of the present-day mental attitude of "rubber manufacturers and their superintendents," but I am inclined to think that this "horror of theory" arises largely from the first stated ignorance of chemistry; the unknown, I am persuaded, is one of the chief causes of superstitious horror. This fear of theory, and its concomitant, the deep rooted faith of its inferiority to practice, exist always in the minds of those only who neither recognize the possibilities of the one, nor the limitations of the other.

I am also, to my sorrow, compelled to admit that the above named leaders of industry "only seek for an explanation of interesting phenomena when it appears profitable to do so." Happily the progress of the world does to an infinitesimal fraction only depend upon "manufacturers and their superintendents," for if it did, you, instead of writing criticisms, and I, instead of replying to them, would, by now, probably be trying to break each others' heads with stone axes, untrammelled by theory. As far as I am aware, every great and lasting step in the world's progress is a more or less unpaid debt we owe to pure theorists.

The "thought of cheapening compounds, or saving dollars for himself or anybody else" has indeed occurred to the author on various occasions of his long years of practical experience, but he also, at an early period of his career, came to the conclusion that this laudable intention would be best served by ascertaining the exact nature and correlations of the materials and means at the command of the India-rubber industry, rather than by "ringing the changes" on the contents of the compounding room. I see to-day less reason than ever to alter this opinion. If "India-rubber manufacturers and their superintendents" will not, or cannot, see this at present, they most certainly will do so at some future time, but under much less favorable conditions.

You were evidently looking in my book for sparks of "practical" wisdom—this in spite of my disclaimer in the preface—and from what you could gather in this way you feel inclined to credit me with experience in mackintosh clothing, druggists' sundries, and hard rubber—a somewhat odd collection. But when, in illustration of one point or another, I drew upon my practical experience, which, I believe, very largely exceeds the above branches, I chose my examples without the thought of my readers using the book as a sort of epitome of the range of my manufacturing experience. Nor did I see any reason to advertise in my book the fact that I possess years of experience in the manufacture of rubber footwear, insulated wires, and mechanical goods of every description, to name only those branches which you assume to lie outside my practical knowledge.

Regarding the question of the use of tar you are quite correct, but as I did not write a book on the manufacture of rubber boots and shoes, but had the average practice of the whole India-rubber industry, not so much in America, as in England and on the Continent in view, my statement still remains substantially correct.

Next you say: "It is an acknowledged fact that a rubber shoe which blooms is not vulcanized enough, and yet such a shoe will show a lasting quality and wear that is phenomenal." Now I, for one, certainly will not acknowledge this "fact," for the simple reason that it is not a fact. The blooming of a shoe, or any other India-rubber article, has nothing whatever to do with either over or undervulcanization. The blooming effect depends simply upon the question of the presence of free sulphur; for the rest undervulcanized rubber goods may, or may not bloom, nor does the appearance of a "bloom" in the least justify the assumption that an article is not overvulcanized.

Likewise, your contradiction notwithstanding, must I adhere to my statement that chrome yellow cannot be used in hot cured goods. I have not seen the yellow branded shoe, but there is certainly all the world of a difference between a yellow surface imprint, produced with chrome yellow, and a yellow compound containing the same pigment. Also, are you quite sure the yellow pigment in the imprint is really chrome yellow, or did perhaps your friends try to "put you off?"

You next quote some statements of mine on the question of non-blooming goods, and attempt to traverse them by examples which, although undoubtedly true in matters of fact, do really not touch at all upon the point the statements in question are aiming at. A little more careful reflection might have shown you this. You further call these statements "theories." I am afraid our notions regarding the meaning of the term theory differ rather seriously. This fear becomes a certainty when you continue: "Few theories concerning India-rubber have yet been established, and almost any practice that gives such results as to lay down laws for certain lines of work, and sometimes for certain factories, is absolutely reversed in other lines of work, and in other factories." Now I am not aware of any single "theory" that has been established concerning India-rubber, and shall therefore be pleased to be informed which they are. The second part of that sentence has a distressing look of mental worry about it, but I take it to mean essentially that the practice of one factory is often "reversed" in another factory. This, on the part of a critic, is unbecomingly loose language. What you imply in speaking of the "reversal" of a practice I am unable to say. It sounds almost like a sort of "living backward," something like "Alice's" experiences, or the effect of a reversed biograph film. I have never heard of "reversed practices" in rubber manufacturing, and if this extraordinary thing really exists, what has it to do with "theory"? It certainly would not "reverse" the latter. It is, of course, quite possible for two firms to manufacture similar articles by more or less different methods, but it is a practical, physical, chemical, and theoretical impossibility that both methods should be equally good, or right, although both may produce salable articles. But this is quite another proposition. A great many firms sell rubber tires, although they are hardly all equally good, not even in American practice. The only discriminating tool in such cases consists, not in workshop fancies, but in a sound theory—*i. e.*, a statement connecting under one point of view all the qualitatively and numerically ascertained physical and chemical data concerning India-rubber. I have attempted to make the first contribution towards that end. Yours faithfully,

CARL OTTO WEBER, PH.D.

Boston, Brunswick Hotel, January, 1903.

LITERATURE OF INDIA-RUBBER.

LES PLANTES TROPICALES DE GRANDE CULTURE. CAFÉ, CACAO, Cola, Vanille, Caoutchouc. Avec une Étude sur la distribution des plantes dans le centre de l'Afrique, et des notices biographiques sur les botanistes et les voyageurs ayant contribué à la connaissance de la Flore de l'Etat Indépendant du Congo. Par E. De Wildeman. Brussels: Alfred Castaigne. 1902. [Roy. 8vo. Pp. iv + 304 + 38 plates. Price, 5 francs.]

DR. DE WILDEMAN has become widely recognized as an authority on the subjects to which this important book relates, through his work as conservator of the state botanic garden at Brussels, as professor in the horticultural school at Vilvorde (Belgium), as a member of the permanent commission of the Congo museum at Tervueren, and as a contributor to botanical and other technical journals. Though this book is devoted to a number of plants of economic value, nearly one half of its pages and 21 of its 38 photogravures relate to Caoutchouc, showing the great importance the future exploitation of this product holds in the mind of the author. In these pages has been admirably compiled a list of rubber yielding plants, of whatever country, and their natural conditions of growth, with notes on the qualities of their product, to serve as a guide to intending planters, particularly in Africa. Methods of extraction and coagulation of rubber are also discussed, embracing a full treatment of the subject of mechanical treatment of latex. In addition, there are extensive notes on the planting practice, to date, with the various species, in different regions. Nothing else quite so complete under these various heads has yet appeared in a single publication, and Dr. De Wildeman has rendered the rubber cultural interest an important service. One thing which it is impossible for such a work to contain, as yet, is a compendium of results of planting rubber species outside of their native *habitat*, and this is a most important problem, which time alone can solve.

NOTES ON LAYING, REPAIRING, OPERATING, AND TESTING SUBMARINE CABLES. U[nited] S[tates] Signal Corps. By Captain Edgar Russell, Signal Corps. With Supplementary Chapter on Factory Testing. By Lieutenant Colonel Samuel Reber, Military Secretary. Washington: Government Printing Office, 1902. [Cloth. 8vo. Pp. 70.]

THE signal corps of the United States army has had so much to do of late with submarine cable working that the chief signal officer, General A. W. Greely, has deemed desirable the compilation of a manual for the use of members of the service engaged in the branches of work referred to in its title, quoted above. The various matters can, of course, be treated only in the briefest manner in so small a volume, but the larger literature of cable working is cited freely, for the benefit of those who would inform themselves more fully. This manual is all the more interesting because it relates throughout to submarine cables insulated with India-rubber, and, to Americans at least, because the cables operated by the signal corps—in the Philippines, Alaska, and elsewhere—were made in the United States and mark the establishment of a new branch of the rubber industry in this country. There are included some data of interest regarding the electrical properties of the various insulating compounds employed in the construction of the government cables.

ÉTUDES POUR UNE PLANTATION D'ARBRES A CAOUTCHOUC. Par Octave J. A. Collet. Brussels: Falkhuis. 1902. [Paper. 8vo. Pp. 45.]

A SUMMARY of observations by the author, in Java, Sumatra, and the Malay peninsula, of experiments made in planting *Ficus elastica* and *Hevea Brasiliensis*, upon which he has based estimates of the cost of establishing plantations and of the profits possible. No such estimates, of course, can be of any value outside of the region and the particular conditions for which they are designed. The brochure is of interest, however, because of its detailed information regarding the rate of growth of rubber species under cultivation under certain circumstances,

and there are a dozen good views, from photographs, of plantations in the countries above mentioned.

IN CURRENT PERIODICALS.

LE Caoutchouc à l'Hacienda Aguna. By Revé Guérin. [Preparation of *Castilloa* rubber on the plantation of Guillermo Rodriguez, in Guatemala.] = *Journal d'Agriculture Tropicale*, Paris. II-15 (September, 1902.) pp. 259-261.

Culture du *Castilloa elastica* aux Indes Néerlandaises. By Dr. Spire. [With views of planted trees of this species, some dating from 1886.] = *L'Agriculture pratique des pays chauds*, Paris. I-6 (May-June, 1902.) pp. 689-698.

Étude Botanique sur les *Landolphia* Considérés Comme Producteurs de Caoutchouc au Gabon. By Henri Hua. = *Revue des Cultures Coloniales*, Paris. XI-114 (December 5, 1902.) pp. 321-328.

Note pour Contribuer à la Vulgarisation du *Manihot Glaniovii* (Ceará) en Annam. = *Revue des Cultures Coloniales*, Paris. X-110 (October 5, 1902.) pp. 212-215.

Méthodes d'Exploitation des Lianes à Caoutchouc au Haut-Laos et en Annam. By E. L. Achard. = *Bulletin Économique de l'Indo-Chine*, Hanoi. V-4 (April, 1902.) pp. 273-281.

Sur les Plantes à Caoutchouc de l'Indo-Chine. By Monsieur Pierre. = *Revue des Cultures Coloniales*, Paris. XI-111 (October 20, 1902.) pp. 225-229.

Le Caoutchouc en Rhodésie. [Based upon "The Rubber Industry in the British South Africa Co.'s Territories," by P. Lyttleton Gell, already mentioned in THE INDIA RUBBER WORLD.] = *Revue des Cultures Coloniales*, Paris. XI-104 (July 5, 1902.) pp. 18-21.

Un *Siphocampylus* à Caoutchouc de l'Équateur. [*S. giganteus*, Don.] By Henri Jumelle. = *Revue des Cultures Coloniales*, Paris. XI-104 (July 5, 1902.) pp. 5-7.

Getah pertja. By A. H. Berkhout. [Review of a brochure, "Études sur la Gutta-Percha Commerciale" by Octave J. A. Collet.] = *De Indische Mercur*, Amsterdam. XXV-31 (August 5, 1902.) p. 580.

Études sur la Gutta-percha Commerciale. By Octave J. A. Collet. [Reply to a criticism by A. H. Berkhout of a former paper by the same author.] = *Bulletin de la Société d'Études Coloniales*, Brussels. IX 9 (September, 1902.) pp. 516-520.

Reisebericht der Guttapercha- und Kautschuk-Expedition nach den Süsee-Kolonien. By R. Schlechter. [Relates to the discovery of Caoutchouc and Gutta-percha in New Guinea, with reports on samples submitted to commercial houses and scientific institutions.] = *Der Tropenpflanzer*, Berlin. VI-8 (August, 1902.) pp. 396-402.

Guttaperchakultur in Kamerun. By Prof. Dr. O. Warburg. = *Der Tropenpflanzer*, Berlin. VI-11 (November, 1902.) pp. 561-564.

Balata and its Employment. [Editorial on uses of this material.] = *Engineering*, London. LXXIV-1920 (October 17, 1902.) p. 513.

Wire and Cable Specifications. By L. T. Collins. = *Electrical World and Engineer*, New York. XL-24 (December 13, 1902.) p. 945.

OTHER PUBLICATIONS RECEIVED.

HANDBOOK of Sierra Leone for 1901 and 1902. Edited by A. B. C. Merriman-Labor, of the Colonial Secretary's office, Sierra Leone. Manchester: John Heywood. [Boards. 12mo. Pp. 213. Price 3 shillings.]

New York Rapid Transit Tunnel. Illustrating the Uses and Application of Rand Drills and Rand Air Compressors in Centralized Air Power Plants. New York: March, 1902. [4to. Pp. 56.]

Special Report of Captain George P. Ahern, in charge of the Forestry Bureau, Philippine Islands, April, 1900, to July 30, 1901. Washington: 1901. [Paper. 8vo. Pp. 60+33 plates.]

The Planting Directory of South India. 1902. Madras: Office of Planting Opinion. [Boards. 4to. Pp. 49. Price, 2 rupees.]

La "Bolivian Company" en la region de Capolican. La Paz: 1901. [12 mo. 17 pp.]

Boletín de la Oficina Nacional de Inmigración, Estadística, y Propaganda Geográfica, La Paz. I-9, 10 (September, October, 1901.) Containing results of the first decennial census of Bolivia, under direction of Señor Manuel V. Ballivian, director general of the comisión nacional.

AMERICAN CONSUMPTION OF INDIA-RUBBER IN 1902.

As shown in the table at the foot of this page, the imports of crude India rubber during 1902 were smaller than during 1901, though exceeded in volume in only two years in the history of the trade. There were smaller exports to Europe, however, and very much smaller stocks at the end of the year than at the beginning, with the result that deliveries to manufacturers were larger than in 1901—or in any other year, save 1889, when a phenomenal consumption of rubber followed an era of depressed trade conditions. In other words, deliveries to manufacturers were only 194 tons less than in the year of greatest consumption, and 2381 tons greater than the average for the five years preceding 1902. The record of consumption for 1902 represents a normal condition of the rubber industry, which during the year has presented a picture of continuous activity, and the new year opens with no indication that this condition will be disturbed. These figures, by the way, do not include Gutta-percha, Balata, or the cheaper East Indian gums. The record of consumption relates to Canada as well as the United States, since the greater part of the requirements of rubber manufacturers in the Dominion are imported via New York.

From the same source is obtained the following comparative statement of prices of fine Pará rubber in New York and Liverpool, for ten years past:

YEARS.	New York.	Liverpool.
1893.....	64 @ 79	2.10 @ 3. 3
1894.....	64½ @ 73	2. 9 @ 3. 1
1895.....	70 @ 81½	3. 0½ @ 3. 4½
1896.....	71 @ 85	3. 0½ @ 3. 8½
1897.....	79½ @ 89	3. 5 @ 3. 9
1898.....	82 @ 1.06	3. 7½ @ 4. 5
1899.....	91 @ 1.10	3. 10 @ 4. 7½
1900.....	83 @ 1.11½	3. 8½ @ 4. 9
1901.....	76 @ 95	3. 4 @ 3. 11½
1902.....	66 @ 92	2.10 @ 3. 9½

The next table analyzes the imports of crude rubber into the United States by grades, the figures denoting tons:

YEARS.	Fine Pará.	Coarse Pará.	*Centra- lais.	African and E. I.	Total.
1897.....	7,556	2,935	2,404	4,776	17,671
1898.....	6,804	2,935	3,003	5,878	18,620
1899.....	8,622	3,876	3,440	7,157	23,005
1900.....	8,079	3,906	3,020	5,463	20,468
1901.....	9,304	3,838	2,927	7,139	23,208
1902.....	8,666	4,235	2,588	6,353	21,842

[* Including Caucho and Pernambuco.]

The percentage of the various grades in the imports into the United States were as follows:

Pará fine.....	39.64
Pará coarse.....	19.40
Centrais, Caucho, and Pernambuco.....	11.86
African.....	29.10

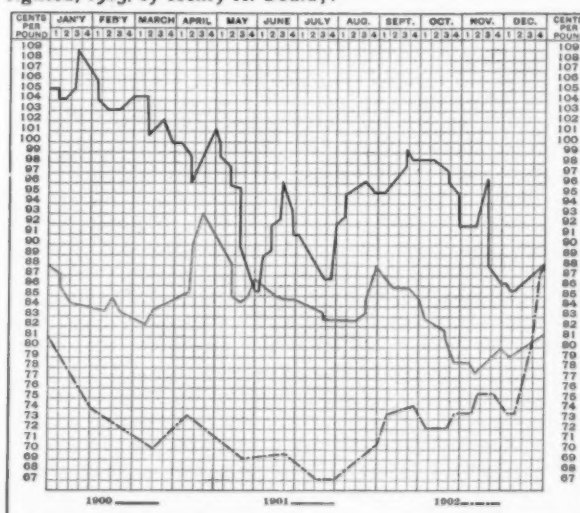
The percentage of fine Pará in the imports for the nine years preceding was: 45¼ in 1893; 46¼ in 1894; 44 in 1895; 45¼ in 1896; 43¼ in 1897; 36½ in 1898; 37¼ in 1899; 39½ in 1900; and 40 in 1901.

The figures in the next table, showing the extent of the world's visible supplies of rubber on January 1, 1903, have been derived from the Messrs. Morse's tables, though they are given on this page in pounds instead of tons, in order that they may be compared readily with former tables:

	Pounds.
Stocks in the United States.....	741,440
Pará grades.....	63,520
Central American and Caucho.....	26,880
African and East Indian.....	551,040
Stocks in Europe.....	5,476,800
Pará grades.....	2,016,000
All other.....	3,460,800
Stocks Para grades at Pará and all at.....	6,003,200
Total.....	12,221,440
Total, January 1, 1902.....	15,026,160
Total, January 1, 1901.....	16,616,320
Total, January 1, 1900.....	10,251,480
Total, January 1, 1899.....	10,215,440
Total, January 1, 1898.....	9,920,960
Total, January 1, 1897.....	10,671,600

RUBBER PRICES FOR THREE YEARS.

DIAGRAM showing fluctuations in spot prices, at New York, of Islands Pará fine rubber, during 1900, 1901, and 1902 [copyrighted, 1903, by Henry A. Gould]:



[The topmost line indicates the course of prices in 1900, the middle line 1901, and the lowest line the range for 1902.]

CONSUMPTION OF INDIA-RUBBER BY THE UNITED STATES AND CANADA (IN TONS).

[From the Annual Statistical Summary of ALBERT T. MORSE & Co., brokers, New York.]

DETAILS.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
Imports to United States.....	13,554	12,942	14,263	16,152	15,347	16,420	14,643	16,182	14,333	17,671	18,620	23,095	20,468	23,208	21,842
Exports to Europe.....	268	116	231	982	491	714	391	324	500	250	150	300	450	680	430
Net Imports.....	13,286	12,826	14,032	15,170	14,856	15,706	14,252	15,858	13,833	17,421	18,470	22,795	20,018	22,528	21,412
Add Stock January 1.....	1,674	1,609	746	1,260	1,086	1,217	1,037	1,420	558	641	744	591	712	1,198	1,399
Aggregating.....	14,960	14,435	14,778	16,430	15,942	16,923	15,289	17,278	14,391	18,062	19,214	23,386	20,730	23,726	22,811
Less Stock end of year.....	1,609	746	1,260	1,086	1,217	1,037	1,420	558	641	744	591	712	1,198	1,399	331
Deliveries to Manufacturers.....	13,351	13,689	13,518	15,344	14,725	15,886	13,869	16,720	13,750	17,318	18,623	22,674	19,532	22,327	22,480

THE AUTOMOBILE SHOW AT NEW YORK.

THE third annual automobile show under the joint auspices of the Automobile Club of America and the National Association of Automobile Manufacturers, at the Madison Square Garden, in New York, January 17-24, has demonstrated not only an interest in automobilism in the United States sufficient to give support to a great industry, but also that the progress made by manufacturers in this country during the past three years has been such as to place them on equality with the most advanced makers in the old world, and render them capable of supplying every demand at home. Measured both by number and the character of the attendance, the last automobile show was one of the most important exhibitions of any kind given at Madison Square. The attendance, for the most part, was not of curiosity seekers, but of people who apparently were able to own automobiles, and whose interest lay in becoming acquainted with the vehicles, with a view at some time to making purchases. In fact, an important amount of business was done on the spot, the aggregate of sales made having been estimated at \$2,000,000, in addition to which many agencies were arranged for, and the future effect of the educational work begun is beyond computation. There were 198 exhibitors, including manufacturers of automobiles, parts, and accessories. Over 80 firms exhibited finished machines. Some of the leading foreign makes were represented, including machines of worldwide fame, and the show was attended by foreign critics of reputation who freely acknowledged the great progress made recently in automobile construction in the United States.

This subject is of particular importance to the India-rubber industry for the reason that it opens a new demand more important than any other single industrial development at any time in the past, and a demand which cannot under any circumstances easily conceivable cease to exist. Not only pleasure vehicles, touring cars, and public conveyances are involved in this new industry, but a wide range of commercial vehicles, including delivery wagons and trucks in wide variety, fire apparatus and so on, every one of which must be equipped with rubber, both for tires and for smaller accessories, the amount of which, in the aggregate, will be very large. There is not space in these pages for a discussion of the types of vehicles shown, but it may be of interest to note that a canvas made at the show revealed the presence of 253 completed vehicles, of which 168 were operated by gasoline, 51 by electricity, and 34 by steam. Of 84 distinct makes of cars, 69 had wood wheels, 11 wire wheels, and 4 tubular wheels. Fifty had detachable tires, 23 hose pipe tires, and 9 had solid tires.

The second large automobile show of the year will be held in Chicago, from February 14 to February 21 inclusive, and many of the exhibits made at Madison Square will be repeated there. The second annual automobile show at Philadelphia, under the auspices of the local automobile club and the local dealers' association, will be held March 2-7. There was a general expression of opinion after the Madison Square show that it closed too soon, and many manufacturers are likely to be represented at a permanent exhibition of automobiles to be opened soon by R. H. Macy & Co., occupying an entire floor in their new department store at Broadway and Thirty-fourth street, New York, and involving more space than the entire arena at Madison Square Garden.

The rubber tire industry was strongly represented at the

automobile show by exhibits from leading companies, in charge of capable forces of attendants and salesmen. These displays were devoted chiefly to standard types of tires, and little was shown in the way of novelty. There was particularly an absence of anything like "freak" tires. The tire exhibits were constantly visited, not only by representatives of existing and prospective manufacturers of automobiles, but by large numbers of persons interested in automobiling and, therefore, in understanding the comparative merits of various kinds of tires. It may be said that the detachable type of pneumatic tire appeared to be in most favor, judging by the number of wheels on exhibition equipped with this type, and from the interest shown by visitors. For the heavier vehicles, however, and particularly the enormous trucks shown, a demand exists for solid tires. By the way, the manufacturers of tires of the latter type insist that, when pneumatic tires are inflated to the extent necessary to get the best possible service from them, they are not more resilient than solid tires made of good compounds, while the latter are free from the annoying liability to puncture. There was evidence of no little business being done by the tire exhibitors. The exhibits will be mentioned in the order of their enumeration in the official catalogue.

HARTFORD RUBBER WORKS CO. (Hartford, Connecticut) exhibited as their leading type the Turner endless solid wired-on tire, in all sizes. Attention was called especially to its merits for heavy motors, and to its durability and the perfect fit obtainable, as compared with tires which are applied by compressing the rubber. Exemption from creeping is also claimed. Other tires shown were the Hartford single tube and Dunlop detachable tires, for automobiles. The Dunlop this year involves some new features in construction. Red inner tubes were shown at this exhibit.

FIRESTONE TIRE AND RUBBER CO. (Akron, Ohio) made a good demonstration of the Firestone side-wire tire, which they have just begun to make in their own factory, after having had their orders filled under contract for some time past. The claim is made for this tire that it can be fitted to the wheel more closely than other types of solid tires, particularly in the case of large sizes; that the cross wires hold the tire in place perfectly, preventing any tendency to creep; and that any trouble is avoided due to the cutting of the rubber, such as results from the longitudinal wires in other solid tires.

FISK RUBBER CO. (Chicopee Falls, Massachusetts) exhibited for the first time the Fisk detachable automobile tire, which they state is covered by their own patent. The distinctive feature in the construction of this tire is that, instead of being held in place by air pressure, the outer cover is retained by a series of clamps and transverse bolts which render it impossible for the tire to come off the rim, whether inflated or not, and which also prevent creeping of the tire. The inner construction of the cover renders it also impossible to pinch the inner tube. The company make a claim of excellence for the special type of fabric used. These tires are made in different weights, but the company assert that increase in size, rather than thickness of walls, produces the best results. The Fisk single tube carriage tire was also shown, and the Fisk single tube tire repair outfit.

METALLIC RUBBER TIRE CO. (New York) exhibited their patent tire cover—capable of being applied to any pneumatic tire—consisting of a strip of rubber studded with flat headed

rivets, driven from the inside and clinched on the outside, the purpose being to prevent punctures and slipping. This device has been shown before, but this year the rivets are placed more closely together than in the past.

THE B. F. GOODRICH CO. (Akron, Ohio) exhibited as their principal type the Goodrich Clincher vehicle tire, which has been their leader in this field since the automobile industry first attained important dimensions. It is made this year with a new and simpler clip, which dispenses with the thumb screw of the former clips. They manufacture also the Goodrich single tube motor tire. In solid tires they offer two types: the Goodrich Solid, which they have begun to make on their own account since certain decisions adverse to the Grant patent were made, and the Goodrich Side-wire, manufactured under license from the owners of Swinehart patent.

CONSOLIDATED RUBBER TIRE CO. (New York) exhibited their widely known Kelly-Springfield solid tire, with retaining wires which are electrically welded, and made in sizes of $\frac{3}{4}$ inch to 4 inches. The company again showed the Hall sectional tire, which has now been made in sizes up to 8 or 10 inches square for the projecting rubber parts. In these large sizes a separate piece of rubber is used for each projection, some of which are $3\frac{1}{2}$ inches deep. They showed for the first time a new Traction tire of novel section, which is held in place by two rows of bolts extending through tire and felly.

G & J TIRE CO. (Indianapolis, Indiana) exhibited their widely known "G & J" detachable tire, in styles for vehicles up to 2400 pounds in weight. These tires are held in place, on special rims, by air pressure. They are now made with smooth treads, though the long familiar corrugations will be supplied to those preferring them.

INTERNATIONAL AUTOMOBILE AND VEHICLE TIRE CO. (New York) exhibited their line of single tube pneumatic motor tires, and also solid rubber wired-on tires, and cushion tires, made at their new factories in Milltown, New Jersey. Their pneumatic tires are made in various types, two of which are the "Fox brand" and "Endurance." The latter is made with two vulcanized inner tubes.

DIAMOND RUBBER CO. (Akron, Ohio) exhibited their "Continental" type of detachable tire, now manufactured under arrangement with the G & J Tire Co. Diamond Single-tube and solid tires were also shown. Inner tubes of red rubber, 4 inches in diameter, served to attract additional attention to this booth. Another new feature is the making of inner tubes by a process warranted to prevent "blooming," which will be helpful in the application of repair patches.

THE GOODYEAR TIRE AND RUBBER CO. (Akron, Ohio) exhibited the Goodyear Endless solid tire which they have been making for sometime past; the Goodyear Detachable pneumatic tire; the new Goodyear reinforced single tube tire; the Goodyear "Wing" carriage tire, and cushion and "puncture proof" pneumatic tires. Also the Akron Clincher tire, and a new "Notched" tire for pleasure cars. The advertising matter distributed from this exhibit was devoted to illustrations of heavy trucks and other vehicles, including a piece of fire apparatus in San Francisco, California, weighing 19,000 pounds, equipped with Endless solid tires.

STANDARD ANTI-FRICTION EQUIPMENT CO. (New York) exhibited the "Be-no-ca," or Beasley elastic tire, for automobiles, and also a tire of somewhat different construction, but made under the same patent, for bicycles. This tire, patented by Colonel W. R. Beasley, of Baltimore, consists of an outer tube of rubber and an inner core, also of rubber, the latter being "constructed on the principles of a trust bridge." The object is to produce a resilient tire which will not be injured

by any number of punctures, since the tire is not inflated. This tire is made for the company by the Alden Rubber Co. The Standard company exhibited the Batavia "Star Brand" solid tire, which is held in place by a longitudinal band with beaded edges.

The only exhibit in the tire field not made by a rubber tire concern was the Cummings "Cinch tire protector," which consists of a band of waterproofed leather, wire quilted, anchored to a base of specially prepared heavy duck, all of which may be "cinched" around any pneumatic tire by means of wires. This is designed not only to prevent punctures and rim cutting, but also to exclude moisture and dust from the tire. This protector on an automobile can be painted to correspond with the running gear. Made by the Cummings Tire Manufacturing Co., No. 68 William street, New York.

The B. F. Goodrich and Diamond Rubber companies for the first time exhibited tires made to metrical measurements—i. e., in millimeters—a desirable feature in equipping wheels of imported motors, which are less easily fitted with tires made to inch measurements.

A novelty in horns fresh from Paris was shown in the gallery. It is a big affair that makes noise enough for a tugboat and the feature of it is a covering of soft sheet rubber stretched over the mouth to keep the dust out of the reed. This rubber distends slightly when the horn is blown and does not injure the tone. Ordinarily wire gauze is used as a dust screen.

GUARDING RUBBER FACTORY SECRETS.

TO THE EDITOR OF THE INDIA RUBBER WORLD: We are continually reading in the newspapers and elsewhere about the uniform courtesy that is shown to foreigners who wish to inspect American factories and manufacturing plants. As far as I know—and my business has taken me to a number of rubber works—this has been true and is true for the most part, of our rubber factories. To be sure, a stranger is greeted generally by the words, in cold black and white: "No admittance without a pass from the superintendent," but this pass has been as a rule quickly forthcoming. In fact in one large factory that I have visited, the management often provides a guide who will pilot one to every crook, cranny, and recess of the immense factory, and who will explain and answer all questions to the best of his ability. I have noted lately, however, a disposition here and there to cut down this freedom of access, and but a short time ago was brought face to face with a new "proposition"—a small card posted in a prominent place in the office of a large factory, reading: "Owing to our many secret processes and special machines, we admit no guests to our factory."

This is a new departure, indeed. Is this a sign that we are acquiring the secretive disposition of some of our European friends, and that it is simply an excuse to bar all outsiders, or is it simply the truth? I am inclined to take the former view and I deprecate it. I am still of the opinion that *brains* and *push* are the only processes and machines that go to make a company successful; "*special machines*" are on all sides of us, and "secret processes" are not the foundations of success. In fact I doubt whether there are many secret processes in use in our factories. The secret of success is in the all round careful management of the business, not in mixing up secret compounds on the rolls.

I trust that this movement will not spread, and believe that it will not. Secrecy breeds suspicion and the more open we are the better will be the general good feeling among the trade, and all our companies will be paying just as good dividends, to boot.

D. L. R.

INDIA-RUBBER GOODS IN COMMERCE.

EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values for the first eleven months of 1902, compared with the same period of three years preceding, not including exports to Hawaii and Porto Rico:

MONTHS.	Belting, Packing, and Hose.	Boots and Shoes.	All other Rubber.	TOTAL.
November, 1902. . .	\$ 75,634	\$ 92,374	\$ 165,922	\$ 333,930
January-October. . .	596,272	865,711	1,659,205	3,121,188
Total, 1902.	\$671,906	\$958,085	\$1,825,127	\$5,455,118
Total, 1901.	547,305	840,971	1,603,047	2,991,323
Total, 1900.	480,898	593,664	1,401,907	2,476,469
Total, 1899.	(a) 240,018	286,713	1,373,609	1,900,340

(a) Included in "All Other" prior to July 1, 1899.

The number of pairs of rubber boots and shoes exported was 2,168,221, against 2,095,151 pairs for the same period of 1901 and 1,133,473 for the first eleven months of 1900.

RUBBER GOODS EXPORTS FROM NEW YORK.

VALUES during five weeks ended December 30, 1902:

Australia.	\$ 7,930	Dan. W. Ind. \$	105	Netherlands. \$	4,940
Aus.-Hung'y	476	D. Guiana	24	Peru.	110
Argentina.	966	Ecuador.	172	Portugal.	220
Belgium.	10,844	Egypt.	53	Philippines. . . .	725
Brazil.	1,045	France.	17,109	Russia.	1,619
Brit. Africa.	9,150	French W. Ind. . .	16	Sweden.	125
Brit. E. Ind.	1,100	Germany.	32,822	Spain.	1,519
Brit. W. Ind.	1,337	Great Britain. . .	68,910	Switzerland. . . .	839
Colombia.	362	Haiti.	74	San Domingo. . . .	237
China.	268	Italy.	571	Turkey (Asia). . . .	10
Cuba.	6,906	Japan.	344	Venezuela.	376
Central Amer.	775	Mexico.	5,631		
Chile.	4,114	Newfoundld. . . .	552	Total.	\$184,175
Denmark.	1,339	Norway.	113		
Dutch W. Ind.	42	New Zealand. . . .	305		

SUMMARY.

July 2-29 (four weeks).	\$117,578
July 30-August 26 (four weeks).	119,103
August 27-September 23 (four weeks).	161,041
September 24-October 28 (five weeks).	208,861
October 29-November 25 (four weeks).	161,484
November 26-December 30 (five weeks).	184,175

Total. \$952,242

Some other exports from New York during the six months July-December, 1902, were in value as follows:

DRESS SHIELDS.		Liverpool.....	30,150	Glasgow.....	3,598
Antwerp.....	\$18,222	London.....	3,598	Gothenburg....	594
Brussels.....	100	Manchester.....	596	Hamburg.....	12,344
Brazil.....	63	Rotterdam.....	272	Havre.....	621
Ecuador.....	15	Stettin.....	25	Hull.....	4,632
Glasgow.....	4,342	Australia.....	288	Helsingfors....	90
Hamburg.....	67,620	Japan.....	230	Kiel.....	125
Havre.....	3,810			Liverpool.....	2,066
Liverpool.....	22,542	Total.....	\$122,079	London.....	14,537
London.....	53,231			Manchester.....	22
Odesa.....	514	CLOTHES WRINGERS.			
Rotterdam....	954	Abo.....	\$ 20	Odesa.....	14
Vienna.....	7,211	Antwerp.....	8,176	Rotterdam.....	7,459
Argentina.....	1,501	Altona.....	580	Stockholm....	540
Australia.....	6,436	Amsterdam...	102	Stavanger.....	75
British Africa.	48	Bremen.....	730	Wiborg.....	105
British W. Ind.	23	Brussels.....	504	Windau.....	80
Mexico.....	1,242	Bordeaux.....	85	Wasa.....	20
Newfoundland	21	Bremerhaven..	495	Zurich.....	112
New Zealand..	445	Bergen.....	59	Argentina.....	193
Uruguay.....	146	Barmen.....	129	Mexico.....	190
		Bradford.....	45	New Zealand..	3,487
		Christiana.....	1,924	Peru.....	111
		Copenhagen...	1,310	Uruguay.....	24
		Chemnitz.....	93	Australia.....	7,216
		Cologne.....	128	Austria.....	204
		Constance.....	483	Japan.....	18
		Danzig.....	1,265	British Africa.	1,777
		Drammen.....	20	British W. Ind.	129
		Düsseldorf....	330	Portug. Africa.	18
		Frankfort o/M	692		
				Total.....	\$77,661

RUBBER THREAD.

Genoa.	1,715	Colombia.	79
Antwerp.	\$ 8,364	Cuba.	355
Barmen.	300	Gothenburg. . . .	75
Genoa.	11,798	Glasgow.	4,040
Hamburg.	16,462	Havre.	29,438
Havre.	8,563	London.	22,222
Hull.	1,427	Liverpool.	56,558
Marseille.	600	Lyons.	9,887
Rotterdam.	4,773	Manchester. . . .	88
Central Amer. . . .	1,235	Vienna.	14,351

Total. . . . \$53,522

RUBBER CEMENT.

Antwerp.	\$1,251	Barcelona.	90	Japan.	441
Barcelona.	300	Fiume.	460	Australia.	225
Brussels.	500	Hamburg.	1,050	Argentina.	827
Breslau.	60			British Africa. . .	360
Copenhagen. . . .	750	Total.	\$1,600	Mexico.	375
Christiana.	10	CRUDE RUBBER.		New Zealand. . . .	11
Frankfort o/M. . . .	400	Brazil.	\$ 90	Nova Scotia. . . .	58
Fiume.	50	Bremen.	50		
Hamburg.	910	Christiana.	1,865	Total.	\$142,498

RUBBER GOODS IN THE YUKON TERRITORY.

THE Canadian special trade commissioner for this district reports to his government that, on account of the large quantity of machinery in operation, there is a considerable demand for belting (leather and rubber), which is now purchased chiefly from Canadian manufacturers and dealers. The sales will increase, he says, as additional machinery is sure to be introduced. He reports a large market for rubber packing, of which he says that Canadians are now getting a share, but have not more than one half of the trade. A good market is reported for rubber hose, which is very extensively used, especially of 1/2 inch sizes, to connect steam pipes to thawing points. The agent says that the Canadians are not getting their share of this trade. To give an idea of the consumption of rubber boots, the agent writes that 15 tons of old rubbers were shipped from Dawson to the United States in one day in August last, and adds: "Some Canadian rubbers shipped a few years ago proved very inferior and unsatisfactory, and since then the main purchases have been from the United States. Careful nursing and energetic effort and a first class article will again secure the trade for Canadian firms." A very large demand in winter is reported for felt boots and shoes, which are principally American, though occasionally bought through Canadian jobbers.

BRITISH EXPORTS OF RUBBER GOODS.

	1900.	1901.	1902.
Boots and shoes.	£ 1,423,464	£ 176,387	£ 171,674
All other.	1,086,028	1,042,884	

Total value. £ 1,423,464

Value of "Apparel and Slops," waterproofed by any process, in 1902: £ 262,244.

Exports of rubber footwear amounted to 138,054 dozen pairs in 1901 and 144,014 dozen pairs in 1902.

CREDIT MEN'S ASSOCIATIONS.

THE New York Credit Men's Association have elected officers and committees for another year, the rubber trade being represented in the official list by Mr. Edward E. Huber, of the firm of Eberhard Faber, as treasurer, while Mr. H. M. Sadler, Jr., of the United States Rubber Co., is a member of the membership committee. The New York association has about 475 members and the national association nearly 5000, including banks, corporations, and large business houses. These associations have done a very important work in the protection of their members against fraud, and in influencing legislation in various states for the better protection of creditors.

RUBBER NOTES FROM EUROPE.

THE Calmon Asbestos and Rubber Works, Limited, have been registered to take over the business of asbestos and rubber manufacturers and merchants, carried on hitherto by the Calmon Asbestos and Rubber Works, at 6, Sheppy place, Menories, London, and to adopt an agreement with the Asbest- und Gummiwerke, Alfred Calmon, Actiengesellschaft, Hamburg. The capital is £50,000, and Herr Alfred Calmon is one of the first directors.

=Mr. Ernest E. Buckleton, general manager and executive officer of the Northwestern Rubber Co., Limited, (Litherland, Liverpool, England), is meeting with the most flattering sort of success in placing his goods among rubber manufacturers in Great Britain and on the Continent. Mr. Buckleton is very much of a cosmopolitan and in his travels is able to interest the French, Germans, Russians, and Belgians, just as much as he does the Anglo-Saxons.

=Wallington, Weston & Co., India-rubber manufacturers, having their warehouse and works hitherto at Limpley Stoke, Bath, England, advise THE INDIA RUBBER WORLD that, owing to increased business, they have secured new mills and laid down a new and larger plant, in a new location. Their only address for office and works hereafter is Wallington, Weston & Co., St. John's Mills, Frome, England. The company are having a good business in solid rubber vehicle tires.

=Reclaimed rubber made from Russian galoshes is being offered to the trade by the Russian-French Rubber Works, "Provodnik," Riga, Russia.

=The Continental Caoutchouc- und Guttapercha- Compagnie had 454 wheels at the Paris automobile exhibition fitted with their tires.

=Mr. T. J. Lloyd, who has been connected with the India-Rubber, Gutta-Percha, and Telegraph Works Co., Limited, for forty years, and had been their secretary since 1896, died in London on December 24. Mr. Lloyd was in his sixty-first year.

THEFTS OF RUBBER IN ENGLAND.

ACCORDING to the *India-Rubber Trades Journal*, which of late has reported several cases of prosecution of thefts of raw rubber, "there is at least for every case prosecuted ten to twenty cases undetected," which must mean a big loss to the trade, and the *Journal* urges that no detected thief should be left unprosecuted. The case is mentioned where a series of thefts went on in a certain rubber factory for a long time, and was detected only by accident. The works were built on the side of a canal and separated from this canal by a wall. The thieving workman, in collusion with an outsider, had only to carry the rubber a few steps and drop it over the wall into the canal, whence it could easily be fished out.

A RUBBER WORKERS' UNION IN ENGLAND.

AT a recent meeting of the Preston Trades' Council, the chairman stated that he was extremely sorry to announce that the Leyland Rubber Workers' Union had come to grief. He quite understood the many difficulties with which they had to contend, but he could not help contrasting their position with the long and plucky stand of the Penrhyn quarrymen. The London *India-Rubber Trades Journal* says: "If the chairman understood the peculiar circumstances that obtain in a rubber works, he would be better able to appreciate why it is that there can never be a union akin to that in any other trade. The first step of a union would be to try to bring about a level rate of pay. In a rubber works, where many of the branches are dependent upon the skill of the workers, such a proposal would

be absurd, and would be worse for the rubber workers concerned. It is to be sincerely trusted that any other attempt to form new branches of the union will meet with the same determined resistance as occurred at Leyland."

HARD RUBBER WORKERS IN LEIPSIK.

A MEETING at "Schloss Lindenfels" at Leipsic-Lindenau, was attended by about 50 rubber turners. After a lecture on "The Duty of the Workman in the Present Industrial State," statistics were presented, showing a total of 128 workers engaged in the hard rubber branch in Leipsic—namely, 84 turners and 28 polishers (grinders). Of these 56 were organized and 31 not organized; 77 per cent. took part in the meeting; 60 married, with 141 children and 27 single; average age 27 years, 9 months, 4 days. Seventeen persons were unemployed for a total of 172 weeks; 18 were sick for a total of 67 weeks. The average wages was 25 marks [= \$5.95] per week, against 22.62 marks [= \$5.38] last year.—*Gummi Zeitung*.

THE RUBBER INDUSTRY IN RIGA.

ACCORDING to an official report, there are three rubber factories in or near Riga, two being small private concerns. The third is the Russian French "Prowodnik" stock company, with a capital of 3,500,000 rubles [= \$1,832,500]. The turnover for 1901 amounted to 8,000,000 rubles [= \$4,120,000]. The profit for the year was 120,000 rubles [= \$61,800], all of which was transferred to reserve and sinking funds. Though no workers were discharged during the year, the working hours were shortened in some cases. Very sharp competition, at home and abroad, is referred to as preventing the earning of larger profits, in spite of the large volume of trading. The daily wages are equal to 36 to 87 cents for men and 21 to 36 cents for women. Piece workers earn from 8 to 36 cents more per day. The production consists largely of "galoshes."

THE DUNLOP TIRE COMPANY.

AT the annual meeting of the Dunlop Pneumatic Tyre Co., Limited, (London, December 10), Mr. Harvey du Cros, in discussing the expiration next year of the Dunlop tire patents, intimated that the company did not fear a German invasion of the trade the moment that the company's patent monopoly ceased. He said to the company that no one could manufacture a "Dunlop" tire without their permission. "The name 'Dunlop' is your property, and cannot be alienated or taken by anybody else, and your position in the cycle trade is secure." On this point it would appear, from the *India-Rubber Journal* (London), that opinion is divided, it having been generally considered that a patented article known by any name, even that of an individual, could on the expiration of the patent be manufactured by any person. Mr. du Cros stated that the turnover of their rubber works during the fiscal year had been £510,000, and that an addition of £40,000 had been made to the capital devoted to the rubber manufacture. The earnings of the rubber company had amounted to £54,000. Speaking of the reduction of prices during the year, he said that if the year's business had been done at the former prices charged for their tires, it would have made a difference in their profit of between £50,000 and £60,000.

DUNLOP PNEUMATIC TYRE CO. OF AUSTRALIA.

THE above company are successfully operating their factory, at Melbourne, manufacturing Dunlop tires and the "Kelly-Springfield" rubber vehicle tire. They expect gradually to extend their manufacture to include nearly all the products of the rubber industry. Their superintendent, John Stearns, formerly of Akron, Ohio, is highly pleased with the country, which he regards as offering a grand field for the development of the rubber industry.

RECENT RUBBER PATENTS.

THE UNITED STATES PATENT RECORD.

ISSUED DECEMBER 2, 1902.

- N**O. 714,659. Bathing apparatus. Herbert G. Batchelder, Allston, Massachusetts.
- 714,858. Manufacture of crude Kerite. William R. Brixey, Seymour, Connecticut.
- 714,859. Kerite. William R. Brixey, Seymour, Connecticut.
- 714,917. Playing ball. Eleazer Kempshall, Boston, Massachusetts.
- 714,918. Playing ball. Eleazer Kempshall, Boston, Massachusetts.
- 715,028. Removable Horseshoe pad. Daniel J. Cummings, New Haven, Connecticut.
- 715,077. Clothes wringer. Maximilian P. Janisch, Muskegon, Michigan.
- 715,094. Automatic pump for pneumatic tires. Charles S. Langton, Parkersburg, Illinois.
- 715,186. Composition of matter for the manufacture of golf balls, etc. Charles O. Watkins, Moriah, New York, assignor of one-half to Charles Garvey, Crownpoint, New York.
- 715,206. Playing ball. Eleazer Kempshall, Boston, Massachusetts.
- 715,243. Protective garment. Katherine M. Davis, Lake Providence, Louisiana, assignor of one-half to Mary Tucker Ruple, Cleveland, Ohio.
- 715,295. Playing ball. Francis H. Richards, Hartford, Connecticut, assignor to the Kempshall Manufacturing Co.
- 715,305. Pneumatic tire. Edward H. Seddon, Brooklands, England.
- 715,353. Process of making dress shields. Theron Davis, New York city.
- 715,359. Fountain pen. Robert B. Dickie, North Freedom, Wisconsin.
- 715,361. Elastic tire for vehicles. Henry H. Durr, New York city.
- 715,387. Horseshoe. Franciszek Kaczynski, Warsaw, Russia.
- 715,419. Pencil sharpener, ink eraser, and paper cutter. Harper Pease, Portland, Oregon.
- 715,430. Detachable pneumatic tire. Frank A. Seiberling, Akron, Ohio.
- 715,566. Hose supporter. Moses H. Eiseman, Chicago, Illinois.
- 715,593. Wheel. Fred Lyon, Ithaca, New York, assignor of one-half to William J. Romer, Ithaca.
- 715,646. Eraser. Richard J. Driscoll, Tarrytown, New York.

Trade Mark.

- 39,422. Certain named rubber goods. The Miller Rubber Manufacturing Co., Akron, Ohio. *Essential feature*—The representation of a pair of hands grasping the ends of a bag or sack, which presumably is of seamless flexible rubber. Used since November, 1899.

ISSUED DECEMBER 16, 1902.

- 715,837. Comb. Franz Mosterts, Berlin, Germany.
- 715,965. Means for ornamenting plastic surfaces. Ernst P. Brandt, Baltimore, Maryland.
- 715,987. Tire fastening. Ralph M. Connable, Baltimore, Maryland.
- 716,066. Resilient tire. Jean P. Le Grand and Narcisse Cheneau, Levallois-Perret, France.
- 716,072. Hose clamp. Frank T. Lippincott, Newark, Ohio.
- 716,099. Tire for motor vehicles. Max Polack, Waltershausen, Germany.
- 716,155. Elastic cable. Julius H. West, Berlin, Germany.
- 716,240. Syringe. Thomas L. Jones, Kansas City, Missouri.
- 716,245. Golf ball. Eleazer Kempshall, Boston, Massachusetts.
- 716,251. Pneumatic hat block. Robert Lamont and Charles E. Weatherhead, Denver, Colorado.
- 716,290. Golf ball. Emmet Schultz, Arlington, New Jersey, assignor to The Arlington Co., a corporation of New Jersey.
- 716,291. Golf ball. Emmet Schultz, Arlington, New Jersey, assignor to The Arlington Co.
- 716,304. Fountain syringe. James H. Stearns, Brooklyn, New York.
- 716,347. Playing ball. Francis H. Richards, Hartford, Connecticut, assignor to the Kempshall Manufacturing Co.
- 716,348. Playing ball. Francis H. Richards, Hartford, Connecticut, assignor to the Kempshall Manufacturing Co.

- 716,349. Playing ball. Francis H. Richards, Hartford, Connecticut, assignor to the Kempshall Manufacturing Co.

Design Patent.

- 36,172. Hot water bag or similar article. Victor C. Van't Woud, Brooklyn, New York.

ISSUED DECEMBER 23, 1902.

- 716,426. Syringe. Alcinous B. Jamison, New York city.
- 716,526. Syringe bulb. Richard H. Eddy, Providence, Rhode Island.
- 716,590. Joint closer for rubber tire setting machines. Will C. State, Akron, Ohio, assignor to the Goodyear Tire and Rubber Co.
- 716,668. Waterproof holder for flower pots. Laura P. Cheney, New Haven, Connecticut.
- 716,693. Pneumatic inner tube for tires. Charles E. A. Esse, Ormskirk, England, assignor of one-half to James Hamilton Cobley, London, England.
- 716,739. Horseshoe pad. Bernard M. Moore and George F. Ebert, Chicago, Illinois.
- 716,784. Device for removing snow. James Sullivan, New York city.

Trade Marks.

- 39,546. Driving belts or bands. Loewitz & Rohlfis, Altona-Ottensen, Germany. *Essential feature*.—The word "Hammonia" and a circle inclosing the head of a woman wearing a castellated diadem. Used since November 1, 1901.
- 39,550. Rubber tires. William F. Beasley, New York city. *Essential feature*.—The compound word "Be-no-ca." Used since June 1, 1902.
- 39,551. Horseshoes and horseshoe pads and blanks. Safety Horse shoe Co., Ocean City, New Jersey, and Philadelphia, Pennsylvania. *Essential feature*.—The representation of a pair of superposed horseshoe shaped figures forming spaces between the sides of the same, with the letters "S H S" disposed in said spaces. Used since July 1, 1902.

ISSUED DECEMBER 30, 1902.

- 716,907. Resilient tire for wheels. Jean P. Le Grand, Levallois-Perret, France.
- 716,945. Golf ball. Lawrence M. Selzer, Akron, Ohio.
- 716,951. Cap or cover for jars. DeWane B. Smith, Deerfield, New York.
- 717,229. Closure for inflatable devices. William F. Lott, Newark, New Jersey.
- 717,263. Protector for rubber tires. Herbert R. Palmer, Cleveland, Ohio, assignor of one-half to Omar Stoppel, Cleveland.
- 717,341. Bicycle tire cleaner. James B. Cahoon, Kansas City, Missouri.
- 717,413. Playing ball. Eleazer Kempshall, Boston, Massachusetts.
- 717,463. Device for holding tires. Clarence M. Starnes, Alto, Pennsylvania.
- 717,480. Vulcanizer. Alfred J. White, Akron, Ohio, assignor to the Williams Foundry and Machine Co., Akron, Ohio.

Trade Mark.

- 39,558. Dress shields. I. B. Kleinert Rubber Co., New York city. *Essential feature*.—The hyphenated word "E-ze-on." Used since December, 1901.

[NOTE.—Printed copies of specifications of United States patents may be ordered from THE INDIA RUBBER WORLD offices at 10 cents each, postpaid.]

THE BRITISH PATENT RECORD.

[* Denotes Applications from the United States.]

APPLICATIONS—1902.

- 23,325. Patrick Alphonsus Martin, 24, Temple row, Birmingham. Manufacture of balls for games. Oct. 27.
- 23,326. Patrick Alphonsus Martin, 24, Temple row, Birmingham. Manufacture of golf balls. Oct. 27.
- 23,330. Thomas Frederick Atkinson and Henry Atkinson, 11, Burlington chambers, New street, Birmingham. Rubber heels. Oct. 27.
- 23,371. Joseph Devonport Finney Andrews, Surrey. Electric cables. Oct. 27.
- 23,402. James Harold Barry, 10, Basinghall street, London. Pneumatic tires. Oct. 27.
- 23,404. Howard William Franklin, 56, Ludgate Hill London. Pneumatic cover for cycle saddles. Oct. 27.
- 23,436. George Edward Shand, 70, Chancery lane, London. Fountain pens. Oct. 27.

- 23,447. Samson Fox, 46, Lincoln's Inn fields, London. Pneumatic tires. Oct. 27.
- 23,478. Patrick Alphonsus Martin, 24, Temple row, Birmingham. Golf balls. Oct. 28.
- 23,501. George Hunt and Thomas Stedman, 44, Temple street, Burnley. Water sprays for the nozzles of hose pipes for fire extinguishing. Oct. 28.
- 23,550. Pierre Germain, 45, Southampton buildings, Chancery lane, London. Treatment of waste Gutta-percha. Oct. 28.
- *23,571. George Harrison, of the firm of D. Young & Co., 11, Southampton buildings, Chancery lane, London. Dress shields. [Gertrude M. Grant, Joseph C. Grant, Herman A. Groth, and William L. Groth, United States.] Oct. 28.
- 23,575. William Whitfield Wiggins, 18, Buckingham street, Strand, London. Vehicle tires. Oct. 28.
- 23,588. Ernest Wright, 10, Salisbury road, Leicester. Rain shield for cycles. Oct. 29.
- 23,589. Thomas Higginson, 279, Oldham road, Rochdale. Rubber heel. Oct. 29.
- 23,607. Joseph Seel, Manchester. Prevention of tire punctures. Oct. 29.
- 23,637. George Henry Clark, 45, Southampton buildings, Chancery lane, London. Pneumatic tires. Oct. 29.
- 23,650. Margaret Maguire, 4, South street, Finsbury, London. Dress shields. Oct. 29.
- 23,654. Arthur Freemore Spooner, 323, High Holborn, London. Protective bands for rubber tires. [Maurice Francois Rondet, France.]
- 23,655. Gerald Morgan Neighbour, 323, High Holborn, London. Waterproof material and its manufacture. Oct. 29.
- 23,671. Harry Parsons, 67, Beechdale road, Brixton Hill, London. Anti-slipping and anti-puncturing tires. Oct. 30.
- 23,706. John Stephen Walley, Heath Cottage, Whitechurch, Salop. Covering India-rubber springs for saddles. Oct. 30.
- 23,707. Naomi Wood, Manchester. Pneumatic vehicle tires. Oct. 30.
- 23,746. Pierre Laurent, 99, Cannon street, London. India-rubber plug for pneumatic tires. Oct. 30.
- 24,066. Gabriel Kostin, 190 Stockwell road, Brixton, London. Flexible tires. Nov. 4.
- 24,162. Herbert Edward Cohen, Birmingham. Attachment of pneumatic tires to rims. Nov. 5.
- 24,185. Henry Vincent Holden, 47, Lincoln's Inn fields, London. Pneumatic vehicle tires. Nov. 5.
- 24,199. John Corlett, 46, Granby street, Liverpool. Sectional tires. Nov. 5.
- 24,210. Giuseppe Vincenzo De Luca, 323, High Holborn, London. Golf balls. Nov. 5.
- 24,231. Henri Falconnet, 6 Lord street, Liverpool. Resilient vehicle tires. Nov. 5.
- 24,232. Theron Clark Crawford, Clun House, Surrey street, Strand, London. Golf balls. Nov. 5.
- 24,252. Samson Fox, Leeds. Pneumatic tires. Nov. 5.
- 24,264. Henry Bancroft, Church, near Accrington. Pneumatic tires. Nov. 6.
- 24,267. Bernard Louis Freemant, 12, Holly avenue, Newcastle-on-Tyne. Heel pads. Nov. 6.
- 24,280. William Burns Shand and Andrew Morison, Glasgow. Golf balls. Nov. 6.
- 24,286. Thomas Burns and Jonathan Shackleton, Bradford. Pneumatic vehicle tires. Nov. 6.
- 24,308. Francis Murray Rogers, 21, Finsbury Pavement, London. Manufacture of golf balls. [H. T. S. Ward and Edgar George Money, Ceylon.] Nov. 6.
- 24,327. John Stuart Campbell, 4, Farnival street, Holborn, London. Pneumatic horseshoe pad. Nov. 6.
- 24,405. Robert Devereux Mothersole, 8, Quality court, Chancery lane, London. Construction of golf balls. Nov. 7.
- 24,479. The Cycle Rubber Co., Henry Keys, and Frederick Day, Birmingham. Band for repairing tire covers. Nov. 8.
- 24,522. Thomas Moore, 4 South street, Finsbury, London. Rubber soles. Nov. 8.
- 24,530. Lewis Johnstone, Birkbeck Bank chambers, Southampton buildings, Chancery lane, London. Inner tubes for tires. Nov. 8.
- 24,534. Walter Wood and Thomas Henry Nicks Bartlett, 18 Buckingham street, Strand, London. Manufacture of golf balls. Nov. 8.
- 24,573. Edward Frankenberg, Manchester. Machine for vulcanizing waterproof fabrics. Nov. 10.
- 24,574. Edward Frankenberg, Manchester. Machine for vulcanizing waterproof fabrics. Nov. 10.
- 24,589. John Joseph Daily, Christ Church, New Zealand. Non-puncturable lining for pneumatic tires. [Date applied for under Patents act, 1901, Nov. 27, 1901, being date of application in New Zealand.] Nov. 10.
- 24,601. Hedley Tichborne Rayner and Charles Harry Moger, 11, Southampton buildings, Chancery lane, London. Apparatus for molding plastic materials. Nov. 10.
- *24,727. Henry Harris Lake, 45, Southampton buildings, Chancery lane, London. Vehicle tires. [Franklin Greenawalt Saylor, United States.] Nov. 11.
- 24,739. Henri Falconnet, 6, Lord street, Liverpool. Resilient vehicle tires. Nov. 11.
- 24,755. Walter Claude Johnson and Joseph William Bass, Norfolk street, Strand, London. Electric cables. Nov. 11.
- 24,756. Walter Claude Johnson and Sydney Paterson, Norfolk street, Strand, London. Insulating material for electric cables. Nov. 11.
- 24,758. George Bascomb Dryden, 45, Southampton buildings, Chancery lane, London. Vehicle tires. Nov. 11.
- 24,773. The Long Acre Motor Car Co., Limited, Claude Maurice Browne, and Arthur Marshall Arter, 46, Lincoln's Inn fields, London. Manufacture of resilient tires and tire covers. Nov. 11.
- 24,847. Francis Knoefel, 39, Aseney crescent, Kentish Town, London. Dental vulcanizers. Nov. 12.
- 24,981. Hannah Plante, Birmingham. Rubber heels and soles. Nov. 14.
- 24,982. Thomas Herbert Smith Palfree, 35, Wright street, Nottingham. Wringing machines. Nov. 14.
- 25,008. Robert Walker, 55, Chancery lane, London. Strengtheners for vulcanite teeth bases. Nov. 14.
- 25,089. John Buchanan, Howard Natali and John Thomas Kellett, 17, Burnley road, Stockwell, London. Golf balls. Nov. 15.
- 25,156. James Harold Barry, 10, Basinghall street, London. Pneumatic vehicle tires. Nov. 15.
- 25,168. Robert William Edlin, Finlay Sinclair, and Edwin Louis Curbishley. Pneumatic tires. Nov. 17.
- 25,186. Mathew Montgomery, Jr., 100, Wellington street, Glasgow. Securing solid rubber tires to rims. Nov. 17.
- 25,189. The Aluminium Castings Co., Greenock. Pneumatic heel pads. Nov. 17.
- 25,200. Robert Blakoe, Penrith, Cumberland. Puncture proof tire. Nov. 17.
- 25,251. Harry Mountfort Wood, Draycott, near Derby. Puncture proof tire strip. Nov. 18.
- 25,304. Walter Clay Peters and William Bellamy, 9, Regent street, London. Pneumatic tires. Nov. 18.
- 25,374. William Draper Sainsbury, 60, Upper Sackville street, Dublin. Device for preventing side slipping of rubber tires. Nov. 19.
- 25,430. Vincent Kitabgi, Khon, 322, High Holborn, London. Protective band for pneumatic tires. Nov. 19.
- 25,447. Alfred Julius Boulton, 11, Hatton garden, London. Puncture proof device for pneumatic tires. [Georges Tupinier and Baron Robert Personne de Sennevoy, France.]
- 25,472. Sam Thomas Richardson and Richard Price, Birmingham. Manufacture of pneumatic tires. Nov. 20.
- 25,474. Peter Rostrom and William Walter Cooney, Manchester. Fire hose nozzles. Nov. 20.
- 25,485. George Boardman, Birmingham. Rubber tire covers. Nov. 20.
- 25,538. William James Green, 62, Kenton street, London. Heel pads. Nov. 20.
- 25,562. Alfred Thorneycroft Eardley, Stockport. Heel pad. Nov. 21.
- 25,573. Alfred John Purser. Stopper fitting for hot water bottle. Nov. 21.
- 25,601. Vernon Percy-Smith, Ludgate circus, London. Chain-armor tire cover. Nov. 21.
- 25,666. George Edward Heyl-Dia, Liverpool. Golf balls. Nov. 21.
- 25,705. James Holden, Burnley. Heel pads. Nov. 22.
- 25,724. John Dowell, 18, Southampton buildings, Chancery lane, London. Molds for rubber teats. Nov. 22.

PATENTS GRANTED.—APPLICATIONS OF 1901.

[Complete specifications have been printed of the following patents, since our last report, the numbers and dates given relating to the original applications, noted already in THE INDIA RUBBER WORLD.]

13,980. Elastic cables. Hardingham, G. G. M., Clun House, Surrey street, London. [Feltin & Guillaume Carlswerk, A.-G., Mulheim-on-the-Rhine, Germany.] July 9, 1901.

- 14,492. Pneumatic tire with supplementary air cushion. Vinten, H. B., Elmside, Ramsgate, Kent. July 16, 1901.
- 14,586. Detachable cover for pneumatic tire. Preston, E. E., 73, Western road, Leicester. July 17, 1901.
- 14,623. Valve for pneumatic tire. Cockburn, J., North British Rubber Co. Castle Mills, Edinburgh. July 18, 1901.
- *14,651. Molding rubber tires having a rubber core. Whitaker, E. C., and Whitaker, F. P., No. 12 Ring street, Providence, Rhode Island, United States. July 18, 1901.
- 14,688. Waterproofing fabrics. Wiley, T. F., 47, Elmfield road, Upper Tooting, London. July 19, 1901.
- 14,750. Pneumatic tires and covers. Paulitschky, C., 14, Wienstrasse, Vienna, V., Austria. July 19, 1901.
- *14,762. Hose for air brakes and steam use. Courtney, W. J., No. 265 Central Park West, New York, United States. July 19, 1901.
- *14,860. Water bags for surgical use. Bailey, C. J., Newton, Massachusetts, United States. July 22, 1901. [Date applied for under section 103 of Patents, etc., act, 1883. Jan 3.]
- *14,891. Hose couplings for air brakes. Whiting, P., East Las Vegas, New Mexico, United States. July 22, 1901.
- 14,894. Artificial feet with pneumatic cushion. Walker, E. H., and Smith, M., Liverpool. July 22, 1901.
- 15,058. Making seamless rubber articles. Baxter, J. E., and Leyland and Birmingham Rubber Co., Leyland, Lancashire. July 24, 1901.
- 15,252. Pneumatic tire. Willis, V., 9, Rochester Terrace, Camden Town, London. July 27, 1901.
- 15,380. Pneumatic tires with internal repair strips. Sim, A. A., Collooney, Sligo, Ireland. July 30, 1901.
- 15,621. Waterproofing composition, involving the use of Pontianak. Thame, J., 10 Bath road, Hounslow, Middlesex. August 1, 1901.

THE GERMAN PATENT RECORD.

PATENTS GRANTED—1902.

- 136,623. Process for producing a material which is an electric insulator and waterproof. F. H. Bowden, London, England. Oct. 1.
- 138,274. Piston ring of hard rubber. Harburger Gummi-Kamm Co., Harburg. Dec. 3.

PATENTS WITH MODELS FILED.

- 187,597. Double cable for the explosion of mines, with conductors insulated by pressed Gutta-percha and covered by spun Para rubber while a layer of linen thread treated with ozocerisine covers the whole. Siemens & Halske, Aktiengesellschaft, Berlin. Nov. 26.
- 187,304. A closed ring of hard rubber on outside, inside with elastic inflatable rubber lining for removing finger growths after they have been deprived of blood. Mrs. Franz Hugershoff, Leipsic. Nov. 26.
- 187,278. Window cleaner, having strips of soft rubber between clamps for use as a washer. Leo Zellner, Särchen near Annahütte. Nov. 26.
- 187,226. Lead pencil holder of hard rubber. Fabrik für Gebrauchsgegenstände. Hennef near Sieg. Nov. 26.
- 187,453. Insert for shoes, made of rubber with metal spring or hard rubber reinforcement, as a cure for flat feet. Fritz Lochte, Hildesheim. Nov. 26.
- †187,643. Leaf turner; a rubber thimble or cap for the finger. Franz Ziegenbalg, Lentwitz near Dresden. Dec. 3.
- 187,925. Suspenders with inelastic webbing and elastic rear button flaps. Mrs. Gus. Wagener, Schwelm. Dec. 3.
- 187,926. Suspenders with inelastic webbing and elastic button flaps. Mrs. Gus. Wagener, Schwelm. Dec. 3.
- 187,385. Artificial foot with rubber heel. Joseph Dameris, Schmalleberg. Dec. 3.
- 187,640. Rubber syringe with a clamp between the collar and suspension ring. Fr. Hirshmann, Nürnberg. Dec. 3.
- 187,760. Tube with introductory slot for catheter clamp and separate tube for the introduction of antiseptic ointment. Dr. Willi Hirt, Breslau. Dec. 3.
- 187,644. Horizontal measuring wheel of celluloid or hard rubber. Richard Lehmann, Schoenberg. Dec. 3.
- 187,629. Running shoe for pneumatic tire with several layers of woven stuff separated by layers of elastic material. Louis Grenier, Berlin. Dec. 3.
- 187,771. Insert for air tires composed of side rings constantly decreasing in size towards the free end. Richard Lins, Berlin. Dec. 3.
- 187,830. Door buffer with iron body, cast about a screw, containing piece of rubber to receive the shock. W. Hensch & Co., Elberfeld. Dec. 3.
- 180,783. Suspenders with inelastic webbing and elastic front button flaps. Mrs. Gus. Wagener, Schwelm. Dec. 10.

- 187,820. Hair dryer, consisting of a rubber tube, moved by hand through warm air, is driven by a small water wheel. Otto Peter, Osnabrück. Dec. 10.
- 188,190. Apparatus for testing Caoutchouc. Gebrüder Freysinger, Riga-Sassendorf. Dec. 10.
- 188,221. Catching claw, with a rubber band or string for attaching a ball to the catching rod. Arthur Mauke, Ruttenscheid; and Fr. W. Engels, Essen o/Ruhr. Dec. 10.
- 188,443. Dress supporter, consisting of a double rubber band connected with two safety pins. Josef Spielmann, Cologne Lindenthal. Dec. 17.

APPLICATIONS.

- W 18,256. Process for producing a homogeneous mixture of Caoutchouc and organic colloids. Dr. C. O. Weber, Manchester, England, and A. Cairns, Glasgow, Scotland. Oct. 1.
- Z 3,431. Apparatus for dipping and drying articles made of rubber. Zieger & Wiegand, Leipsic. Oct. 1.
- A 8,779. Rubber hose with protecting asbestos insert. Asbest- und Gummiwerke, Alfred Calmon, Hamburg. Oct. 8.
- W 17,909. Overshoes of elastic form-retaining and waterproof material. John Friederich Wallmann & Co., Berlin. Oct. 8.
- S 16,672. Process for preserving cleansed Caoutchouc during transport and while in store. Silver and Dubois, Kalk, near Cologne. Oct. 15.
- E 8,226. Urethral syringe. Christopher Engelbreth. Copenhagen, Denmark. Oct. 22.
- M 21,365. Process for putting a covering of rubber on the textile parts of cloth shoes. Patrick Millar Mathew, Edinburgh, Scotland. Oct. 22.
- W 17,644. Elastic hollow rubber tire with full inner core. William Fr. Williams, London, England. Oct. 29.
- C 10,643. Pneumatic tire for wagon wheels and the like. Joseph McCanna, London, England. Oct. 29.
- 13,001. Rubber tire with insert of wood. Charles A. Pettie and Emma Cutler Pettie, Brooklyn, New York. Nov. 5.
- 18,613. Mouth-piece for irrigators, syringes, and the like. Henricus Wallace Westlake, Los Angeles, California. Nov. 12.
- 13,163. Pneumatic tire. G. W. Pitt and Edward Martin, London, England. Dec. 3.
- 16,099. Leaf turner in shape of finger stall. Johann Sieghold, Bremerhaven. Dec. 10.
- 28,630. Elastic button fastener for clothing and boots and shoes. Betty Heckl, Munich. Dec. 10.
- 17,300. Hollow rubber tire with lacings enclosing spiral springs. William Fr. Williams, London, England. Dec. 17.

UNITED STATES CUSTOMS DECISIONS.

THE United States general appraisers at New York have rendered a decision in the matter of the protest of A. H. Funke, against the decision of the collector of customs at New York, as to the weight and amount of duties chargeable on "white counteracted Gutta-percha fuse," imported March 4, 1902. The decision holds that fuses composed in chief value of Gutta-percha, used for blasting purposes by being connected with, and adapted to explode, a detonator, which in turn fires a fulminate, are not dutiable under paragraph 421, act of July 24, 1897, as fulminates, fulminating powder, or like articles, but are dutiable at the rate of 35 per cent. *ad valorem* under paragraph 450 of said manufactures in chief value of Gutta-percha. The protest is accordingly overruled and the decision of the collector affirmed.

The appraisers have overruled the protest of Samstag & Hilder Brothers regarding the classification of merchandise invoiced as elastic belting. A portion of the importation was returned by the appraiser as "silk, cotton, and India-rubber wearing apparel," and the remainder as "silk, cotton, and India rubber webbing." The importers claimed the goods to be in chief value of vegetable fiber. The board found at the hearing that silk was the component material of chief value. These belts were finished and ornamented with small steel stars, which penetrate the goods and are riveted on the reverse side.

THE TEXTILE GOODS MARKET.

THE new year in the cotton goods market opened under varying conditions. In attempting to inform the India-rubber trade as to the position of the cotton goods market it is much easier to tell where it will not be found for the next two months than to indicate the point where it will progress before the limit has been reached and something resembling stability in prices is established. It is hardly possible just now to keep pace with the rapid movement of values. To-day's range becomes the subject of radical revision to-morrow, and the average man can scarcely get his bearings, whether buyer or seller. The entire trade is in a fever of expectancy and uncertainty. It is possible to find sellers who would wish to be released from contract obligations, despite the fairly good return, for they feel that it would be more profitable to sell now than it was in September last, when most of the rubber manufacturers placed their orders for the year. Perhaps this sort of reasoning would be more pertinent if certain conditions existed to give force to it; but they do not exist, and it is still the belief that the seller is better off with an assured outlet for his product for the next year than he would be if business was not in concrete form and subject to the capriciousness of the buyer.

In connection with the raw cotton market, Alfred B. Shepperson, an undisputed authority, declares that, from present indications, the crop will not exceed 11,000,000 bales. Of late the market has been only moderately active, although prices have displayed remarkable firmness. Ever since New Year's prices have been gradually advancing. The strength has been almost wholly due to the smallness of receipts and the generally strong statistical position of the staple. The world's visible supply is gradually decreasing as compared with last year's total. These facts furnish the "bulls" rather good material to work with, although thus far they do not seem to have developed the possibilities to a great extent. There is no better barometer of the market's strength, viewed from the standpoint of the rubber manufacturers, than the fact that the latter are advancing the price of their products. They contend that it will be impossible for them to maintain the present standard of quality without realizing more money for their goods.

During the past month there has been a very marked improvement in the demand for sheetings from the manufacturers of rubber boots and shoes, and the prices paid have been from $\frac{1}{8}$ to $\frac{1}{4}$ cent per yard advance over the prices asked in December. Prices made are for spot supplies for which the demand has been running principally, for some weeks. The following figures will show the comparative cost of sheetings during the past three years in the local market:

	1903.	1902.	1901.
Forty-inch, 2.50.....	6 $\frac{1}{2}$ c.....	6 $\frac{1}{2}$ c.....	6 $\frac{3}{4}$ c.....
Forty-inch, 2.70.....	6c.....	5 $\frac{3}{4}$ c.....	6 $\frac{1}{2}$ c.....
Forty-inch, 2.85.....	5 $\frac{3}{4}$ c.....	5 $\frac{1}{2}$ c.....	5 $\frac{3}{4}$ c.....
Forty-inch, 3.00.....	4 $\frac{3}{4}$ c.....	4 $\frac{3}{4}$ c.....	5 $\frac{1}{4}$ c.....
Thirty-six inch, 3 yard 5 $\frac{1}{2}$ c.....	5 $\frac{1}{2}$ c.....	5 $\frac{1}{2}$ c.....	5 $\frac{1}{4}$ c.....

The following figures show the price of spot cotton at the ports of New York, New Orleans, and Liverpool on Wednesday of each week in January:

	New York.	New Orleans.	Liverpool.
January 7.....	8.90c.....	8 $\frac{1}{2}$ c.....	4 78d.
January 14.....	8.85c.....	8 $\frac{1}{2}$ c.....	4 70d.
January 21.....	8.95c.....	8 $\frac{1}{2}$ c.....	4 80d.
January 28.....	9.00c.....	8 $\frac{3}{4}$ c.....	4 80d.

The demand for feltings during the month has been exceptionally good, and sellers have been compelled to ask consumers to use a little patience in the event that deliveries are not made to suit them. The Joseph Wild Co. have been making

some extensive additions to their facilities, in hope to better cope with the fast growing demand for their product.

The textile manufacturers of Canada are pushing their campaign to force the Canadian government to increase the tariff schedule in its application to cotton goods. They have been issuing literature and obtaining signatures to monster petitions which are to be presented to parliament at its next meeting. Their object is to raise a great popular tariff cry, which will be at its zenith about the time that parliament convenes. A rich "lobby" is to be sent to Ottawa, and there are expressions of confidence that, despite objections from rural constituencies, the house of commons will erect a much higher tariff wall.

RECLAIMED RUBBER AND RUBBER SCRAP.

THE market for reclaimed rubber during the past year has not exhibited such fluctuations as have occurred in connection with crude rubber, which in itself would hardly be an occasion for remark, since these two lines do not always keep together in the matter of price. It might be well, however, for rubber manufacturers to pay careful attention to the present situation with respect to reclaimed rubber, which has become so important an item of raw material for the American rubber industry. The steady growth in the production of rubber goods has called for a proportionately larger amount of reclaimed rubber, and since the capacity for the production of this material is limited, a higher range of values in the near future should not occasion surprise. Besides, crude rubber has ruled low, comparatively, during most of the year, and a general advance in all grades is likely to lead to a wider consumption of reclaimed stock in certain branches of the industry, which would prove an additional force in advancing prices of the latter. While the total volume of rubber goods going into consumption increases year by year, the chief basis thus far for the production of reclaimed stock is the supply of old rubber shoes. It is pointed out by a member of the reclaiming trade that an increasingly large proportion of the reclaimed rubber produced is going into products of a class which do not again contribute anything to the rubber scrap market. This is notably true of insulated wire, carriage cloth, and some other goods which, as everybody knows, never figure in rubber scrap, while another large proportion goes into lines of mechanical goods which have not yet been successfully devulcanized, whatever may prove true in future.

To sum up, therefore, the tendency in reclaimed rubber is toward the extension of the demand at a more rapid rate than the increase in the collection of its principal source—rubber shoe scrap. The fact that reclaimed rubber prices have not advanced materially during the past year has been due to the even tenor of the rubber scrap market. This latter fact has been due in part, no doubt, to conditions which have been growing up in the reclaiming trade, whereby consumers of scrap have accumulated large stocks and have been rendered independent of the market to the extent of not being obliged to buy whenever prices showed a tendency to rise. The result has been to keep prices of scrap down below the figures which prevailed two or three years ago, and, correspondingly, reclaimed rubber prices have remained lower than at the time referred to. With an increased demand, however, and without increased supplies, these conditions cannot exist continuously, for which reason manufacturers of rubber goods may find themselves forced in the not distant future to figure on higher prices for reclaimed stock.

Our quotations on rubber scrap at New York show no increase over those printed last month

NEW TRADE PUBLICATIONS.

THE UNITED STATES RUBBER CO. (New York) issued their illustrated Catalogues and Price Lists of Rubber Boots and Shoes this year on January 1, as was the case last year, after having previously issued them annually on April 1. These catalogues are of the usual character, and their contents will be referred to in greater detail in another part of this paper. As in the past, these catalogues are got up with a view to attractiveness in appearance, and the company's advertising manager, Mr. John P. Lyons, deserves renewed mention for the success which he has maintained in bringing out original and pleasing features with each new season. The catalogues received are those of the American Rubber Co., the L. Candee & Co., Woonsocket Rubber Co., Goodyear's Metallic Rubber Shoe Co. (Wales Goodyear), a catalogue of the "Jersey Co." brand, and another of "Meyer" and "Jersey" brands combined. These catalogues are $3\frac{1}{2}'' \times 6''$ in size, and from 16 pages (Jersey) to 63 pages (Wales-Goodyear).

BOSTON RUBBER SHOE CO. begin their fiftieth year with the issue of an illustrated Price List arranged on new lines, but embracing the usual details in convenient form for reference. It has a tasteful cover and calls attention to the growth of their daily production from 600 to 55,000 pairs of boots and shoes. [$6\frac{1}{4}'' \times 6''$ 32 pages.]

GOODYEAR'S INDIA RUBBER GLOVE MANUFACTURING CO. (New York) issue an illustrated priced catalogue of rubber boots and shoes. [$3\frac{1}{2}'' \times 6''$ 64 pages.]

LYCOMING RUBBER CO. (Williamsport, Pennsylvania) in their Catalogue and Price List of "Lycoming" and "Keystone" brands of rubber footwear, call special attention to the addition of "extension heels" to new lines. [$3\frac{1}{4}'' \times 6''$ 64 pages.]

THE JOSEPH BANIGAN RUBBER CO. (Providence, Rhode Island) issue an illustrated catalogue of "Banigan" and "Woonasquatucket" brands, with net prices. [$3\frac{1}{2}'' \times 6''$ 48 pages.] Also, a gross price list of 16 pages.

HOOD RUBBER CO. (Boston, Massachusetts), in their illustrated catalogue of rubber boots and shoes, mention the growth of their production from 3000 pairs daily in 1896 to ten times that figure at present. [$3\frac{1}{2}'' \times 6\frac{1}{2}''$ 64 pages.] An accompanying price list fills 16 pages.

BEACON FALLS RUBBER SHOE CO. (Beacon Falls, Connecticut), include in their new net Price List of rubber boots and shoes, a very full line of "Combinations." [$4'' \times 7''$ 31 pages.]

APSLEY RUBBER CO. (Hudson, Massachusetts), pending the issue of their illustrated catalogue, have sent out a gross Price List, dated January 1. [$3\frac{1}{2}'' \times 6''$ 12 pages.]

LAMBERTVILLE RUBBER CO. (Lambertville, New Jersey) issue an illustrated net Price List of E. Stout's patent "Snag-proof" rubber footwear for 1903. [$3\frac{1}{2}'' \times 6''$ 24 pages.]

THE GUTTA PERCHA AND RUBBER MANUFACTURING CO. OF TORONTO, LIMITED, are sending out a handsomely got up priced catalogue of Yachting, Tennis, and Lacrosse Shoes. [$3\frac{1}{2}'' \times 5\frac{1}{2}''$ 12 pages.]

THE B. F. GOODRICH CO. [Akron, Ohio] issue a catalogue of Goodrich Clincher Tires for automobiles and other vehicles, which is fully illustrated with sectional views, showing all the details of construction, and other illustrations indicating the proper method of applying these tires with a view to obtaining the best service from them. [$5\frac{1}{4}'' \times 8\frac{1}{2}''$ 28 pages.]—Also a catalogue of Palmer Tires, Goodrich Tires, and Rubber Bicycle Sundries. The Goodrich company manufacture a number of tires—M & W. and G & J., for example—under license, so that this firm is prepared to fill any want in the way of bicycle tires and sundries. This catalogue embraces the Pickett all

rubber valve, which has been fully described in THE INDIA RUBBER WORLD. [$5\frac{1}{4}'' \times 8\frac{1}{2}''$ 24 pages]

THE EUREKA RUBBER MANUFACTURING CO. (Trenton, New Jersey), lately organized, issue a Preliminary Catalogue of India-Rubber Goods for Mechanical Purposes (belting, hose, tubing, packing, etc.), with prices. [$3\frac{1}{2}'' \times 6\frac{1}{2}''$ 24 pages.] They announce that a very complete catalogue is in course of preparation, and invite requests for it.

GOODYEAR RUBBER CO. (St. Paul, Minnesota) devote their Catalogue No. 194, to "Gold Seal" and "Goodyear" Over-shoes—brands which have long been in the market, maintaining a high position in the face of the strongest competition. The catalogue includes also rubber heels and soles. [$4\frac{1}{4}'' \times 7''$ 40 pages]

NORTH BRITISH RUBBER CO., LIMITED, (Castle Mills, Edinburgh, Scotland) issue a Price List of mechanical rubber goods which covers a very wide line, including, besides belting, hose, and packing, many such articles as railway buffers, gas bags, golf tees, press rolls, billiard strips, carriage brake blocks, rubber buckets, bellows strainers, strips for ship port lights, horse-shoe pads, tires and so on—covering practically the whole line of rubber goods in the mechanical branch. Prices are given in great detail, and the book is amply illustrated, but it lacks much of the descriptive matter which it is customary to include in the lists of American manufacturers. [$7\frac{1}{4}'' \times 9\frac{1}{4}''$ 32 pages].—The illustrated catalogue and price list of Over-shoes, Boots, and Canvas Shoes issued by the same company comes to us with amended prices. It also includes waterproof goods in extensive variety, especially mackintoshes for men and women. [$7\frac{1}{4}'' \times 9\frac{1}{4}''$ 32 pages.]

We have referred already to the completeness and general excellence of the catalogue of the LEIPZIGER GUMMIWAAREN-FABRIKEN, AKTIENGESSELLSCHAFT, vormals Julius Marx, Heine & Co. (Leipsic), a long established firm whose specialty is the class of goods known in the United States as druggists' sundries. It is interesting to note, as an indication of the growing importance of the export trade of this house, that they have just issued an edition of their entire catalogue in French, comprising 400 large pages, and listing 7440 items of goods, with many hundreds of illustrations of typical articles in the various lines manufactured by them. The Leipsic firm are represented in Paris by Mons. S. Walter, 7, Passage Saulmier.

THE export house of A. BAUMERT (Mühlenstrasse 68A, Berlin, Germany), established in 1859, sends an illustrated price list of rubber goods devoted chiefly to what are called druggists' sundries in the United States, and embracing not a few articles of American manufacture, including water bottles, syringes, and the like. [$7\frac{1}{2}'' \times 11''$ 24 pages.]

THE DURHAM RUBBER CO., LIMITED (Bowmansville, Ontario), in addition to a new edition of their full catalogue of mechanical rubber goods, preceding issues of which have been noticed in THE INDIA RUBBER WORLD, send us a Hose Price List [$6\frac{1}{4}'' \times 3\frac{1}{2}''$ 12 pages] and a folder describing their "Durham" and "Czar" rubber heels.

ALSO RECEIVED.

BOSTON Belting Co. (Boston) = Fire Hose for Factory and Mill Protection. 4 pp.

The Stein Double Cushion Tire Co., Akron, Ohio. = [Descriptive pamphlet]. 8 pp.

R. D. Swisher Manufacturing Co., Nos. 152 154 Fifth avenue, Chicago. = Special Catalogue and Net Price List of Rubber Stamps. 48 pp.

The La Crosse Rubber Mills Co., La Crosse, Wisconsin. = [Folder describing the "Indian Hill" brand of mackintoshes] 6 pp.

L. E. Waterman & Co., No. 157 Broadway, New York. = A Book About [Fountain] Pens. 24 pp.

NEWS OF THE AMERICAN RUBBER TRADE.

RUBBER SHOE JOBBERS IN CONVENTION.

THE annual meeting of the Western Association of Shoe Jobbers in Chicago, on January 5, was well attended by representatives of the rubber shoe selling agencies and jobbing houses throughout the territory covered by the association. The belief was expressed that selling prices would be maintained and an exceptionally good year's trade was predicted. The old officers were reelected, Mr. Orlando C. Smith, of the Smith-Wallace Shoe Co. (Chicago), being chosen president for the fourth term. At the banquet in the evening, attended by 98 guests, the first toast was in honor of Mr. E. S. Converse, president of the Boston Rubber Shoe Co.—At a meeting of the Eastern Association of Shoe Jobbers, in Boston, on January 14, it was agreed to adopt the same selling discount as prevailed last year, which means no cutting of prices.

SWEET TIRE AND RUBBER CO. (BATAVIA, N. Y.)

At a directors' meeting on January 3, Frank Richardson was elected president, Ashton W. Caney vice president, John M. Sweet secretary, and George E. Perrin treasurer. Mr. Richardson was until recently president of the Batavia Carriage Wheel Co.; Mr. Sweet, superintendent of that company, and Mr. Caney a traveling salesman for it; and Alderman Perrin lately disposed of a cigar business, in which he had been engaged for nineteen years, to accept his new position. Mr. Sweet is the patentee of a solid rubber vehicle tire now on the market, and has invented processes for making and applying tires. Work is progressing on the company's factory, and all the machinery is reported to have been shipped by the makers. The company will begin by making tires, with a view to adding other lines of rubber manufacture. They obtained a New York charter on August 21, 1902, with an authorized capital of \$80,000.

MORGAN & WRIGHT (CHICAGO.)

A STRIKE at the factory of this company was formally declared at an end at midnight on January 3. The cause of the strike involved no question of hours or wages, but it was charged by the labor unions that when men were laid off, in dull seasons, the highest priced were selected. A sympathetic strike at the Chicago Rubber Works followed, and the teamsters' union assisted by refusing to do any hauling for either factory. The end of the strike followed the adoption of an agreement that in the laying off of employes in any department, those longest in service in that department shall not lose any time in preference of any new employé, providing that in all cases they are competent and reliable.

AMERICAN BICYCLE CO.

REFERRING to the plans for reorganization outlined in the last INDIA RUBBER WORLD [page 137] it may be added that during January the reorganization committee announced that, more than a majority of the outstanding debentures and a large amount of stock of both classes having been deposited with the committee, the plan had become operative. Under date of December 30 a "debenture holders protective committee" issued a call for a deposit of securities under a plan in opposition to that of the reorganization committee, but later this call was withdrawn. A published report states: "When the committee took hold of the American Bicycle Co. they found it in debt, with no working capital, and members of the committee and Colonel Albert A. Pope have already loaned

the company \$750,000 for working capital, taking receivers' certificates and notes of the company for collateral."—It was announced on January 26 that about 95 per cent. of the debentures had been deposited under the agreement, and that the time for deposit had been extended to February 2, inclusive. The reorganization plan has been modified by providing that the second preferred stock shall be entitled to dividends at the rate of 5 per cent. cumulative after February 1, 1905, instead of 6 per cent. non cumulative.

REMOVAL OF THE HODGMAN RUBBER STORE.

THE Hodgman Rubber Co. (New York) will occupy from this date a new location for their store and offices, at Nos. 806 808 Broadway. In the building immediately north of the grounds attached to Grace church they have secured the entire ground floor, 50 × 230 feet, and extending from Broadway to Fourth avenue. The course of Eleventh street across town is interrupted by this block, so that the firm make prominent in their announcements, as an indication of their location that will be easy to remember, that they are "opposite Eleventh street." The house of Hodgman, founded in New York by Daniel Hodgman in 1838, is the oldest rubber business in continuous exist-

ence in the United States. Beginning at the intersection of Nassau street and Maiden lane, when that was a central position in the mercantile trade of New York, the Hodgman Rubber Co. have kept pace with the gradual progress uptown of the business center. Finding themselves recently compelled by the growth of their business to seek larger quarters, they have not only met this condition in the choice of their new location, but have gained a more desirable situation for the carrying on, at the present



time, of the branch of business in which they are engaged, besides securing a store more creditable to the company. In addition to their new store being so spacious, it is exceptionally well lighted, having the advantage of a row of windows overlooking the churchyard. The Hodgman Rubber Co., during their long existence, have gradually added to their lines of production until they now embrace an unusually large number and varied character of goods, a new catalogue of which is now being prepared for the trade. The accompanying cut gives a good view of the Broadway front as one looks northward.

COAL SHORTAGE AT AKRON.

A CORRESPONDENT OF THE INDIA RUBBER WORLD writes: "The general shortage of fuel in Akron and elsewhere has seriously inconvenienced all the local rubber manufacturers. Through a great part of January they had a hand-to-mouth existence in this respect, buying coal in whatever quantities and at whatever prices they could. One large concern had men in the field all the time in search of fuel. The rubber companies as well as other manufacturers have, as a rule, contracts with mine operators, but the latter have been selling their output

elsewhere at higher prices, instead of meeting their contract obligations. Some factories have been obliged to shut down, but none of the rubber concerns reached this point, and the famine is now virtually over."

THE OHIO RUBBER CO. (CLEVELAND, OHIO).

THIS company on January 1 purchased the Cincinnati branch of the Cleveland Rubber Works (of the Mechanical Rubber Co.). Under the new arrangement they have a much larger territory. They have increased their capital to \$175,000. They will employ three or four traveling men with headquarters at Cincinnati, and ten at Cleveland, including city salesmen. H. B. Hallock, who had been manager of the Cincinnati branch, will continue in charge there. The personnel of the company is about the same as before, the directors being: W. E. Byrnes (president and manager), H. B. Hallock (vice president), W. D. Hunt (secretary), E. C. McKay (treasurer), and W. E. Crofut.

FAILURE OF A SUIT FOR DAMAGES.

A SUIT for damages against The B. F. Goodrich Co. (Akron, Ohio), which was in many respects a test case, was won by that company on January 23, after a trial which lasted more than two days. David Davis, an employé of the company, was injured while working at a calender in their factory on April 10, 1899, with the result that his left arm had to be amputated. He sued for \$30,000 damages, early in 1900, and the case came to trial on January 21 last. Davis alleged that it was through the negligence of the company and defects in the machinery that he was hurt. The defense was that he knew the nature of his work and of the machinery on which he was employed, and was hurt by his own negligence. Davis preferred a contest to a settlement out of court, but failed to prove to the jury that the machinery was defected.

UNITED STATES RUBBER CO.

ACCORDING to a New York financial paper, the earnings of this company (including subsidiary companies) for twelve months ended November 30, 1902, were \$1,284,320; interest paid, \$772,214; depreciation charged off, etc., \$351,131; total charges, \$1,123,345; surplus, \$160,975. The company reported for the regular business year ended March 31, 1902, net earnings of \$1,182,596; all interest, \$1,063,100; surplus, \$119,496.

MR. PLACE AND THE METROPOLITAN RUBBER CO.

[See THE INDIA RUBBER WORLD, January 1, 1903—page 135.]

THE Connecticut superior court, at New Haven, on January 2, granted the motion of attorneys for Charles A. Place, of New York, for permission to withdraw the suit of Place to recover \$27,000 from the Metropolitan Rubber Co. (in liquidation), alleged to be due him as salary as president of that company for three years, and unpaid. The suit of Mr. Place was brought originally in New York, but was transferred to New Haven as part of the legal proceedings incident to winding up the company's affairs. It is reported that Mr. Place's claim has been settled outside the courts.

RUBBER WORKERS' UNION.

BOSTON has been selected as headquarters for the Amalgamated Rubber Workers' Union of America, organized on November 6, 1902, at Washington city, under a charter from the American Federation of Labor, authorizing the organization of persons engaged in making "rubber footwear of every description, hose, tires, drug and surgical articles, tapes, capes, hats, cloaks, clothing, mechanical goods, and every other article in the manufacture of which rubber is included." Thomas J. Edwards, president of the rubber workers' union already existing at Cambridge, Massachusetts, and president of the Cambridge Central Labor Union, is the general president of the new national rubber workers' union, Clarence E. Akerstrom, of the

rubber workers' union at Concord Junction, Massachusetts, has been elected general secretary-treasurer. A national convention of the new union is talked of for Akron, Ohio, probably in June next.

LAST OF THE MODEL RUBBER CO.

THE plant formerly owned and operated by this company at Woonsocket, Rhode Island, has been purchased by the Macrodri Fiber Co., who will manufacture a pulp bobbin. The Model Rubber Co. were incorporated July 14, 1899, under Rhode Island laws, with \$100,000 capital, to manufacture rubber footwear, by Patrick J. Wren, Thaddius B. Brennan, and Frederick Hadfield. A factory was erected and equipped at a cost of \$43,000, and the making of third grade shoes was begun early in January, 1900—daily capacity 1800 pairs. The factory was leased May 24, 1901, to the Empire State Rubber Co., who went into bankruptcy before the end of the year. The factory and its contents were purchased August 21, 1902, by Fred L. Smith, and afterward remained idle.

THE PEOPLE'S HARD RUBBER CO.

AT Akron, Ohio, on January 24, suit was filed by Jennie E. Coburn against the American Hard Rubber Co. and Fritz Achelis; George G. Allen, J. J. Freeman, H. E. Andress, L. D. Brown, and F. H. Waters, as directors of the People's Hard Rubber Co.; James W. Hoffert, the assignee of the company; and Colonel George T. Perkins, trustee of certain stock in that company. The plaintiff alleges ownership of 14 of the 1395 shares of the People's Hard Rubber Co. which have been issued, 1270 shares of which are alleged to have been sold to Fritz Achelis. She alleges further that the American Hard Rubber Co. is organized to control the hard rubber trade restrict competition and exact exorbitant prices, and further alleges in regard to the recent change of control of the People's Hard Rubber Co., its subsequent reorganization, and the assignment on December 31, that these proceedings were unnecessary and illegal, and in pursuance of a policy of restricting trade by shutting out the competition of the People's company. The plaintiff asks judgment for \$2800, under the anti-trust law of Ohio, that sum being twice the par value of the stock she holds, and which she is entitled to collect in the event of winning the suit. Musser & Kohler, attorneys for the plaintiff, state that they are preparing to begin other similar suits against the same defendants.

On November 11, 1902, a contract was signed under which I. C. Alden and George C. Kohler, directors of the People's Hard Rubber Co., agreed to deliver 1270 shares of that company's stock to Fritz Achelis, at a value to be fixed by appraisal. The American Appraisal Co. (Chicago), being employed, reported assets amounting to \$279,501.32, from which was deducted the liabilities, and the holders of 1270 shares were paid something like 55 per cent. of their par value, an additional 10 per cent. being withheld pending the collection of accounts receivable. Mr. Achelis being a non resident, it was agreed that the transfer should be made through Colonel George T. Perkins, a director in the American Hard Rubber Co., as trustee. The factory was taken in charge by J. J. Freeman, of the New York office of the American Hard Rubber Co., and has since remained closed. On November 29 H. E. Andress was elected president of the People's Hard Rubber Co., F. H. Waters vice president, and J. J. Freeman secretary and treasurer—the first two being members of an Akron law firm—to whom one share of stock each had been transferred. On December 31 James W. Hoffert, of the same law office, presented to the directors demand notes for \$100,000, and a deed of assignment was filed the same day, Hoffert being named as assignee. Following the assignment appraisers were appointed, who made a report on January 19, and the assignee

made application for an order of sale of the property. Notice of exceptions to the issuance of such order was given by attorneys claiming to represent certain stockholders, but the exceptions have not yet been placed on record. The reason given, however, was that the new appraisal was too low—showing only \$148,851 of assets. Dissatisfaction is expressed among the stockholders who did not dispose of their holdings, and among the original promoters and managers of the People's company. The former claim that their interests were jeopardized by the assignment, and the latter aver that their credit has been injured by the assignment of the People's company, inasmuch as it had never been announced that they were no longer connected with the company, and that new officers were in charge.

The Coburn suit, noted above, is the first action of record instituted by the dissatisfied stockholders. The People's Hard Rubber Co. were incorporated under the Ohio laws in April, 1901, with \$200,000 capital, and organized in the office of Musser & Kohler, named above, on April 12. George C. Kohler was elected a director and general counsel for the company. Work was begun at the factory early in 1902, and the company were reported to be doing a good business until November 17, when the factory was closed, it being rumored at the time that the American Hard Rubber Co. had purchased control.

GROWTH OF THE RUBBER STAMP TRADE.

BASED upon confidential statements made to it by several leading houses, *The Commercial Stamp Trade Journal* (Chicago) estimates the volume of the stamp and stencil trade in the United States during 1902 at \$6,500,000, being an increase of 25 per cent. over the year previous. Manufacturers of such goods, generally, have increased their facilities, and for the most part prices have been fair and reasonable. The greatest output is in the shape of rubber stamps and rubber type, followed closely by stencils and checks, and then numbering machines, perforators, and the like. The rubber stamp and stencil trade is also important in other countries. The four great centers of the industry are New York and Chicago, in the United States, and London and Berlin. Another journal devoted to this trade is published at Frankfort o/Main, Germany.

NEW INCORPORATIONS.

GORDON MANUFACTURING CO. (Harrisburg, Pennsylvania), December 23, 1902, under Pennsylvania laws; capital \$25,000. Francis H. Gordon, president and manager; J. W. Bowman, treasurer; H. H. Bowman, secretary. The Gordon company have been in business as a copartnership for about five years, manufacturing linen interlined "rubber" collars and cuffs. They have been successful, making one addition after another to their capacity, and have now increased their capital. They advise *THE INDIA RUBBER WORLD*: "We have not made any celluloid novelties heretofore, but we have embodied that in our charter, as we intend, in the near future, to enter into the manufacture of celluloid novelties of different descriptions."

=Certificates of incorporation under the laws of Massachusetts were granted January 10 to the Shawmut Rubber Co. and the Massachusetts Rubber Co., both of Boston, with \$5000 and \$2000 capital, respectively. The incorporators were the same in the case of both companies: Bertram Lord, Robert L. Rice, and Francis S. Dane. Mr. Lord is president of both companies and Mr. Rice treasurer. The object of these companies is to deal in rubber boots and shoes, the sales being in charge of Chester J. Pike. It is understood that the goods sold will be made under contract by one of the large factories, in two grades, branded "Shawmut" and "Massachusetts" respectively.

TRADE NEWS NOTES.

=THE annual meeting of the stockholders of the New York Rubber Co. was held in New York on January 27.

=George C. Smith has been appointed general superintendent at the factory of the New York Rubber Co., to succeed Thomas S. Judson, whose death was reported in *THE INDIA RUBBER WORLD* of December last. Mr. Smith has been employed by the company for many years.

=The trustees for the holders of the first mortgage 6 per cent. bonds of the Mechanical Rubber Co. have advertised their readiness, under authority of the mortgage, to expend \$55,853.75 in the purchase of bonds, provided the same can, in their opinion, be made advantageously on February 1, at the offices of the Knickerbocker Trust Co., New York.

=Ernest H. Brandt has resigned as manager of the two branches in New York city of the Hartford Rubber Works Co., to become manager of the United States Fastener Co., which controls most of the patents on fasteners for gloves and the like, with headquarters in New York. Mr. Parker has been connected with the Hartford company since 1901. He will be succeeded at their New York branches by Robert B. Parker, who has been hitherto at the Hartford factory.

=The suit of Morgan & Wright v. Pennsylvania Rubber Co., for alleged infringement of patent in making the pinched end inner tube for bicycle tires, has been decided for the defendants in the United States circuit court for the western district of Pennsylvania.

=The Pennsylvania Rubber Co., on changing their location from Erie to Jeannette, Pennsylvania, removed their machinery to the new plant. The real estate occupied at Erie has been sold.

=M. J. Burke will represent the Eureka Fire Hose Co. (New York) hereafter in the sale of their standard brands of fire hose to the fire departments in California, Oregon, Washington, and adjacent territory, with headquarters at No. 573 Market street, San Francisco.

=The Combination Rubber and Belting Co. (Bloomfield, New Jersey) have opened a store in Chicago, at No. 198 Randolph street. Mr. E. F. Norton, who was formerly with the Pennsylvania Rubber Co., has charge of the same, and has engaged for his head salesman Mr. Beck, who was also with the Pennsylvania company.

=The Chicago branches of the United States Rubber Co. and the United States Rubber Co. have been consolidated, at Nos. 244-246 Monroe street, with Charles B. Allen in charge. The Baltimore agencies of the two companies have also been consolidated, at No. 102 Hopkins place, with W. H. Jones as selling agent.

=H. G. Armstrong, formerly representative of the United States Rubber Co. at Baltimore, and later in Chicago, is now at the general offices of the company in New York, as selling agent for the Candee brand of goods.

=The machinery used by the Milltown India Rubber Co. (Milltown, New Jersey) has been removed, part going to the New Brunswick factory of the United States Rubber Co., and part to Malden, Massachusetts.

=M. M. Converse has become connected with the New England trade of the Beacon Falls Rubber Shoe Co., with headquarters at the company's Boston store. Mr. Converse was the senior partner in the firm of Converse & Pike—since succeeded by the Tremont Rubber Co. (Boston)—when ill health compelled him to retire from business.

=The Pittsburgh Asbestos Reduction Co. have been incorporated in Pennsylvania, to make insulating products of asbestos, freed from iron by a new process, and rubber.

=The Hartford Rubber Works Co. of late have added to their production several lines of goods other than tires, and it is now reported that they will place upon the market a new rubber heel.

=The Goodyear Rubber Co.'s factory at Middletown, Connecticut, began working on a five day schedule on January 19.

=The Linthicum Rubber Co. (Baltimore, Maryland) handlers of the "Banigan" and "Woonasquatusket" footwear, have removed to larger quarters, at No. 25 Hanover street, where they occupy six floors, 30 x 165 feet.

=The Chicago branch of Edward R. Rice, which has the selling agency for the Joseph Banigan Rubber Co., will continue to be operated under the old name, for the reason that the proposed change of name to the Banner Rubber Co. would conflict with another concern in the same territory.

=The ninth annual banquet of the Mishawaka Woolen Manufacturing Co. (Mishawaka, Indiana), on the evening of January 7, was attended by the officers and directors of the company, nearly 100 salesmen, and a number of invited guests. Among the speakers was Mr. E. A. Saunders, manager of the rubber department, who outlined the policy of the company and its plans for the future.

=William F. Mayo & Co. (Boston, Massachusetts) are congratulating themselves over the fact that their business for 1902 was the largest done by any concern in the United States, jobbing rubber boots and shoes, and this too whether exclusive handlers of rubber goods or part leather and part rubber. Their net sales for the year amounted to \$1,234,000.

=A newspaper at Woonsocket, Rhode Island, referring to the busy times in the Woonsocket Rubber Co.'s factories, mentions a report that an order for 30,000 pairs of rubber boots had been received at the company's Millville factory, though the newspaper could not verify it.

=The Stoughton Rubber Co. (Stoughton, Massachusetts) have discontinued the sale of rubber boots and shoes. They have carried hitherto the "Boston" lines.

=William H. Holmes, who for thirteen years has been connected with Morgan & Wright (Chicago), and who is an expert on molds, dies, and rubber machinery, has started an up-to-date plant for the manufacture of machines, molds, presses, etc., at No. 218 East Washington street, Chicago. Mr. Holmes has associated his brother with him, the firm name being Holmes Brothers.

=A strike occurred early in January in the press room of the Dickinson Hard Rubber Co. (Springfield, Massachusetts), the strikers objecting to a new order placing all the men in the room on day wages, instead of giving some of them piece work. On January 10 it was announced that the places of the strikers had been filled. The company declined a proposition to arbitrate.

=The Knickerbocker Trust Co. (New York) will pay interest on the first mortgage 6 per cent. bonds of the Safety Insulated Wire and Cable Co., on and after February 2.

=The Phillips Insulated Wire Co. (Pawtucket, Rhode Island) are reported to be contemplating the erection of a manufacturing building, of brick, one story, 175 x 50 feet, to cost \$50,000.

=William H. Cummings & Sons (New York), dealers in rubber waste, have removed from No. 48 to Nos. 54-56 Harrison street. Their correspondence should be addressed, as before, to Postoffice box 732.

=An official of the Goodyear Tire and Rubber Co. informs the Akron (Ohio) *Times-Democrat* that the number of orders placed for bicycle tires indicates that as many wheels as last year will be placed on the market this spring.

=S. F. Denny recently resigned the position of manager of the Quaker City Rubber Co.'s store at Chicago, which he had held for nearly seven years, and with G. A. Coffey, of Grand Rapids, Michigan, a rubber salesman of long experience, has purchased the rubber store of E. B. Silliman, No. 204 Woodward avenue, Detroit, Michigan. The business will be conducted under the name of Goodyear's Rubber Store, doing a wholesale and retail business in rubber goods and mill and engineers' supplies. Mr. Denny will look after the management of the store, while Mr. Coffey will represent it in western Michigan.

=As justifying the new policy of concentration of management of the various plants controlled by the Rubber Goods Manufacturing Co., the Hartford (Connecticut) *Times* says that at one time, under the old régime, a certain company was on the point of securing a very large contract for rubber tires, when another company, in the same combination, but not understanding the situation, bid for the contract and obtained it, at a figure amounting to \$100,000 less than had been named by the first company referred to. It was not long after the facts became known that a policy was adopted which took the constituent companies out of the position of working against each other.

=The Kelley-How Hardware Co. and the Thomson-Glaskin Co., of Duluth, Minnesota, have been consolidated, as the Kelley-How-Thomson Co. Two strong jobbing houses, handling distinct lines of goods, have united to form a stronger house, the idea having been suggested by their former frequent exchange of goods in filling orders. The Thomson Glaskin Co. was incorporated in January, 1901, to wholesale mill and mining supplies and mechanical goods, which lines will be carried by the consolidated firm, in connection with hardware.

=A very practical object lesson in air drill and pneumatic hose is issued by the Whitman & Barnes Manufacturing Co., (Akron, Ohio). There are displayed on a card a section of hose itself, together with the duck cover, the rubber cover, the interior plies of duck, and the tube; showing at a glance the construction of the hose and giving the purchaser a chance to test the quality of stock, friction, etc.

=In the Trenton *Times's* twentieth anniversary souvenir there are three pictures showing the yards of the prosperous lumber company of Wilson & Stokes, in which firm Mr. W. J. B. Stokes, whose large rubber interests in Trenton are well known, is a partner.

=Mulconroy Co., Incorporated (Nos. 1213-1215 Market street, Philadelphia), have added to their mechanical rubber goods lines a department of leather belting, packings, and transmission machinery, under the management of William J. M. Weaver. The latter was, until January 1, partner in the Philadelphia branch of I. B. Williams & Son, representing the New Jersey Car Spring and Rubber Co.

=The annual meeting of the stockholders of the American Hard Rubber Co. will be held at their office, Nos. 9-13 Mercer street, New York, on Tuesday, February 10, at 3 P. M.

=The Hanover Rubber Co., incorporated last October, are now operating their factory at Greenpoint, Brooklyn, New York, proofing cloth for the trade and making white sheeting. The office of the company is at No. 302 Broadway, New York. The organization of the company is to be completed at a meeting of the stockholders during the early part of this month.

=A number of rubber firms doubtless will be interested in the ninth annual Sportsmen's Show, to be held at the Madison Square Garden, in New York, from February 21 to March 7, inclusive. The display of sportsmen's supplies at these shows has increased in extent every year.

=The capital stock of the Rubber Trading Co. (No. 38 Murray street, New York), by a typographical error, was stated in these pages last month at \$50,000, whereas the figures should have read \$60,000.

=H. C. Young, formerly with the Buckeye Rubber Co. (Akron, Ohio) has been appointed superintendent of the factory of the International Automobile and Vehicle Tire Co. (Milltown, New Jersey).

=There are rumors that the earnings of the Rubber Goods Manufacturing Co. for the fiscal year ended January 31 will show 12 per cent. earned on the common stock, after providing for the 7 per cent. dividend on the preferred.

=If you want to make your *mark* in the world and are likely to buy now, or want to buy later on, "Eureka" rubber lined cotton fire hose or rubber garden hose, send to the Eureka Fire Hose Co. for a price list, and also ask for a neat souvenir combination lead pencil and eraser, which they will send gratis. It is one of the most useful business gifts of the season. Their address is No. 13 Barclay street, New York.

=Paul Beaudreau has sued the Model Rubber Co. (Woonsocket, Rhode Island) to recover \$3000 for damages alleged to have been sustained through the fracturing of a leg by a lever, while at work for the company in their factory on January 2, 1902.

=A dealer at Salem, Massachusetts, has received an order from China for nine pairs of rubber heels.

=Alexander M. Bartow, mentioned last month as having been missing for some time, and being under charges of embezzling funds while in position of cashier for W. R. Brixey (New York), committed suicide on January 15, at Bangor, Maine, where he was living under an assumed name.

=Shares of the Marconi Wireless Telegraph Co. were traded in for the first time on the New York "curb" market on January 22, when 1100 shares changed hands at 5½. Four hundred shares of the American De Forest Wireless Telegraph Co. changed hands at 4¼.

=The "Goodrich picture" for 1903 represents "Aida," who comes from out of the dim past and from the Far East, and is the daughter of a king and princess of the blood royal. In courtly phrase she suggests in the announcement that accompanies her beautiful likeness that "The King's court will remain in the state apartments in the royal palace night and day, to receive your orders, which can only reach the throne when addressed to The B. F. Goodrich Co., Akron, Ohio." The picture is exceedingly attractive and is a valuable addition to the remarkably beautiful series that the Goodrich company have created.

PERSONAL MENTION.

MR. HENRY C. PEARSON, Editor of THE INDIA RUBBER WORLD, is now in Mexico, with a view to a personal inspection of the rubber planting situation.

=Recent visitors from abroad at the office of THE INDIA RUBBER WORLD were Mr. James F. Moseley, of David Moseley's Sons, Limited, Manchester, England; Dr. F. A. Traun, of the vulcanite works of Dr. Heinrich Traun & Sons, Hamburg, Germany; Herr Johann F. Möller, of the asbestos and rubber works of Alfred Calmon & Co., Hamburg; Mr. Arthur P. Somerville, of William Somerville's Sons, Liverpool, England, and Mr. W. L. Adams, who is interested in planting, at Livingston, Guatemala.

=Mr. Arthur Loring Jackson, lately of Cambridge, Massachusetts, and Miss Pauline Fay Stone, of the same city, were married on December 10 at Lima, Peru. Miss Stone journeyed to that point with a party of friends, to meet her prospective husband, who came up from Sorata, Bolivia, where he has

been stationed for a year and a half as representative of the Chicago-Bolivian Rubber Co. Mr. J. Jackson Todd, of Brookline, Massachusetts, and president of the rubber company, together with Mrs. Todd, accompanied Miss Stone to Lima and were present at the wedding. Mr. and Mrs. Jackson spent Christmas at La Paz, the Bolivian capital, after which they proceeded to their future home, at Sorata—located 8000 feet above the sea level, amid peaks of the Andes mountains. This is the central trading point for rubber shipped from Bolivia via Pacific ports, and headquarters in that country for the Chicago-Bolivian Rubber Co. The principal office is at Boston. Mr. Jackson is the son of Patrick T. Jackson, of Cambridge. Before going to Bolivia he had spent two years in the rubber trade at Pará, in the house of Adelbert H. Alden.

=Ohio is not unlikely to elect a man interested in rubber manufacturing as governor. The Hon. Charles Dick, vice president of the Goodyear Tire and Rubber Co., is looked upon as a receptive candidate for the Republican nomination, and leading newspapers have said that the nomination is his if he wants it.

=The will of the late Richard Butler, of the American Hard Rubber Co., which has been admitted to probate in New York, after devising some tokens of affection to relatives, leaves nearly his entire estate to his widow and two daughters, to whom, and to his friends Edwin W. Belcher, Jr., and J. Langdon Ward, is left the execution of the will.

=Mr. George H. Mayo, junior member of the firm of W. F. Mayo & Co. (Boston, Massachusetts), has taken a midwinter vacation, visiting Cuba, Nassau, and Mexico.

OBITUARY.

FREDERIC CLARK SAYLES, who died January 5 at the age of 68, at Pawtucket, Rhode Island, was born in that place, and was the first mayor after the town became a city. In 1863 he was admitted as a partner in the firm of W. F. & F. C. Sayles, whose bleachery enterprises expanded until they operated the largest works of the kind in the world. Mr. Sayles for a number of years had been a director in the Woonsocket Rubber Co., and since 1899 a director in the United States Rubber Co. The village of Saylesville, with its beautiful memorial church, its railroads, its well kept houses and streets, owes its growth and development to the energy, good taste, and public spirit of the Sayles brothers, and is a lasting monument to their liberality. In October last Mr. Sayles presented to the city of Pawtucket, as a memorial to his deceased wife, the Deborah Cook Sayles Free Public Library, at a cost of \$250,000. Mr. Sayles is survived by two daughters and two sons, one of the latter, F. C. Sayles, Jr., being a director in the Woonsocket Rubber Co. Mr. Sayles was descended, through both his parents, from Roger Williams, the founder of Rhode Island. At the time of the death of W. F. Sayles, in 1894, the wealth of the two brothers was estimated at \$20,000,000.

=Archie B. Clark, manager of the Chicago office of the Pennsylvania Rubber Co. (Jeannette, Pennsylvania) for nearly three years past, prior to which time his home was in Akron, died in Chicago on January 1, aged 33 years. Mr. Clark had worked very hard upon the annual inventory and suffered from bowel trouble. For relief he took an injection of carbolic acid and water, and the solution being too strong, the shock and a blood clot which formed, caused his death. The funeral services were held in Akron on January 4. The deceased was a son of George B. Clark, of Akron, and a most popular young man. He leaves a wife and three sons, aged six, four, and two years.

=Peter W. Gallaudet, who died January 11, at Stamford, Connecticut, in his seventy-third year, was long well known in

Wall street, New York, as a broker. His office there was frequented for years by Christopher Meyer, the leading rubber manufacturer of his day; Benjamin F. Breeden, and others connected with the rubber trade who were investors in railway stocks.

=John A. Meyers, for more than forty years an employé of The J. & H. Phillips Co., rubber goods dealers, of Pittsburgh, Pennsylvania, died on January 1 at his home in that city. He was a prominent mason and is survived by a widow and three children.

=Louis Muller, one of the oldest American residents, of Panama, Colombia, died there on January 11. About 50 years ago he had headed an exploring expedition to the gulf of Darien in search of India rubber for an American syndicate.

NEW YORK STOCK EXCHANGE QUOTATIONS.

UNITED STATES RUBBER CO.:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Dec. 20	845	15 1/4	14 3/4	1,163	52	50 1/4
Week ending Dec. 27	1,200	16 3/8	15 1/2	278	54	52
Week ending Jan. 3	1,790	17 1/2	16 3/8	1,088	58	56
Week ending Jan. 10	1,000	17 1/2	17	413	57 1/2	57
Week ending Jan. 17	3,085	18 1/2	17	325	57 3/8	56
Week ending Jan. 24	1,070	17 1/2	17	210	56	55 1/2

RUBBER GOODS MANUFACTURING CO.:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Dec. 20	1,480	22	21	967	70	69 1/2
Week ending Dec. 27	2,720	23	21 1/2	1,420	72 1/4	71
Week ending Jan. 3	3,389	22 1/2	21 1/2	1,068	73	72 1/2
Week ending Jan. 10	6,595	23 1/2	21 1/2	3,935	76 1/4	73
Week ending Jan. 17	14,040	25	23	3,370	79 1/2	77
Week ending Jan. 24	13,180	25 1/2	23 1/4	1,745	79 1/2	78

CALENDARS FOR 1903.

THEODORE HOFELLER & Co. (Buffalo, New York) issue a handsomely got up vest pocket calendar, with spaces for memoranda for each day in the year, together with a good map of the United States and various information desirable for ready reference.—James Boyd & Brother (Philadelphia) send a convenient memorandum calendar for desk use, with one page for every week.—Boston Belting Co. (Boston) send a handsome leather mounted desk calendar with a set of cards, one for each month.—B. C. Tillinghast, a rubber goods jobber (Philadelphia), sends a new pocket memorandum book bound in celluloid, with a calendar for three years and useful memoranda for reference.—S. Birkenstein & Sons, waste rubber merchants, of Chicago, send a new desk calendar mounted in aluminum.—The Stamford (Connecticut) Rubber Supply Co. send a hanging calendar ornamented with an attractive photogravure and containing a reminder of their rubber substitutes.—The Ohio Rubber Co. (Cleveland, Ohio) issue an attractive calendar, in a series of four floral pictures, each covering three months of the year.—La Favorite Rubber Manufacturing Co. (Paterson, New Jersey) advise us that a copy of their Pocket Diary for 1903 will be sent to any engineer writing to them and mentioning THE INDIA RUBBER WORLD.—J. Schnurmann (27-29, Downham road, London, England), dealers in waste rubber, has sent us an attractive illustrated calendar.

THE Dunlop Tire Co., Limited, of Toronto, Canada, are manufacturing two styles of rubber shoe heels, and are gradually adding to their production a number of articles in rubber other than tires.

PRICES OF RUBBER FOOTWEAR.

THE leading rubber shoe manufacturers announced a revision of list prices on January 1. The changes in prices are not uniform, and on many items no change has been made, it being stated that the object of the revision has been to adapt the selling prices more closely to the cost of production. A comparison of the new lists of several companies with those for the preceding year shows an average decline of 5 per cent. on rubber boots; there are variations of 5 to 20 cents per pair on heavy rubber shoes, but a number of items show no change, and the average is the same as last year; on lighter goods there has been a general advance in list prices, ranging from 4 to 10 cents per pair, and averaging 2.2 per cent. over last year's list. All prices are subject to change without notice.

Discounts to retailers from the lists of the United States Rubber Co. will remain without change, as follows, until May 31, 1903 (discounts to jobbers also remaining the same as last year):

First quality brands (except Woonsocket and Meyer.....)	35 @ 10 @ 3
Woonsocket and Meyer brands.....	35 @ 10 @ 3 @ 5
Second quality (except Rhode Island).....	35 @ 10 @ 10 @ 3
Rhode Island brand.....	35 @ 10 @ 10 @ 3 @ 5

From June 1 to November 30, 1903, or thereafter, one 10 per cent. discount on each brand will be changed to 5 per cent.

The following figures show the net cost to the retailer of short boots, listed formerly at \$4.20, during 1902 at \$4.50, and this year at \$4.30 per pair:

April 1, 1900.....	\$2.99	April 1, 1901.....	\$2.33
November 1, 1900.....	3.15	January 1, 1902.....	2.50
January 3, 1901.....	2.99	January 1, 1903.....	2.44
February 1, 1901.....	2.46	June 1, 1903.....	2.58

The United States Rubber Co.'s "memorandum of agreement" with the jobber embodies no restriction upon prices to be charged by jobbers to retailers, as was insisted upon in former years. As a result the impression prevailed at the beginning of the year that price cutting might become general. This, however, now appears less probable. It will be remembered that upon the first adoption of the form of contract used by the United States Rubber Co. for a number of years, the point was urged by some jobbers that, having once bought goods, it was within their right to sell at any price they chose to. The bad results from price cutting, however, led the jobbers after awhile to a voluntary indorsement of the policy of maintaining prices, through a series of shoe jobbers' associations now extending over most of the country. These associations still remain active, and have practically committed themselves since the opening of the year to maintaining the rate of discounts in force. It has been pointed out that the system of branches and selling agencies now maintained by the rubber shoe manufacturers is so general that the cutting of prices by a jobber in almost any part of the country could be met promptly by the local agency of the manufacturers, in view of which fact it is not regarded as probable that the jobbing trade will depart from the policy of the past few years.

The new rubber shoe catalogues present no marked change in styles or shapes. There are, on the whole, perhaps fewer items listed than in former years. The introduction of the "service" or "extension" heel and "rolled edge" goods has become more general. Fewer widths of toes are shown in several catalogues, the narrowest lasts disappearing where any change is made.

The Canadian rubber shoe manufacturers will announce new lists and discounts on March 1, involving an advance, on account of the high cost of raw materials.

THE RUBBER TRADE AT AKRON.

BY A RESIDENT CORRESPONDENT.

TO THE EDITOR OF THE INDIA RUBBER WORLD: As was foreshadowed in this correspondence last month, the rubber manufacturers of Akron have made a general advance in prices. The increase varies more upon different lines of goods than among the different manufacturers. While the advance in the price of crude rubber, and the indication that it will continue indefinitely at high figures, is the chief reason given for the increase, the added cost of nearly every kind of raw material, fuel, etc., have all contributed to the necessity for the change. The B. F. Goodrich Co., were the first to send out formal notices to the trade, but others have rapidly done the same, the advanced quotations dating from about January 1. Orders booked prior to the notices of the advance are being filled at the old figures, but for all other business there are higher quotations. From talks with representatives of several factories, it appears that there are no lines of rubber goods which are not affected by the advance in prices, though the increase is not uniform on all goods. The increase ranges from 5 to 10 per cent., at this time, but the opinion is expressed by manufacturers that another advance is likely to be necessary by April 1.

* * *

NOTICES of an advance of 10 per cent. in the wages of all the people upon their payroll (there are about 2400) were posted by The B. F. Goodrich Co. on January 8. While the advance was nominally effective January 1, it really began a few days earlier, dating from the pay day just prior to New Year's. The increase makes the payroll of the company a little more than \$1,000,000 a year, the advance adding \$100,000 annually to the salaries and wages account. The raise was a surprise to the employes and they received the news with hearty cheers. The notices of advance read: "Until further notice, on account of the increase in the expenses of living." While the Goodrich Co. are the only ones making formal announcement of a general advance in wages, other companies have been increasing the pay of employes in a somewhat less general way but nearly, if not quite, to the same extent. Advances in this and that department have been made by the different factories from time to time during the past several months, and the general average of wages paid was never before so high in the rubber business in Akron.

* * *

THE automobile tire business seems to grow brisker every day. While the local factories can meet the existing demand only by running at night, they are ever reaching out for more trade—and getting it. The B. F. Goodrich, the Diamond, the Goodyear Tire and Rubber, and the Firestone Tire and Rubber companies all made large exhibits at the recent automobile show in New York, and will also be generally well represented at the coming show in Chicago. But the value of such displays to the manufacturers of tires is being questioned more and more. Not less than fifteen exhibitions have been scheduled to take place this year, and the tire men have been invited, solicited, urged, to make displays. To most of them the cold shoulder will be turned.

"There is nothing for us in the smaller exhibitions," said a leading manufacturer; "nothing except expense. The New York and Chicago shows are legitimate. They are under the auspices of the Automobile associations and we can be profitably represented at such. But the exhibitions which are fathered by promoters after the money there is in them, have no attractions for us. In the old days of the bicycle business, shows

were held in towns of no more than 5000 population. The majority of them were schemes to get money from the manufacturers and there were few that did not succeed—in this. The drift of the automobile shows is the same way and the tire men, at least, will pretty generally stand together in refusing to be taken in."

Other Akron manufacturers have confirmed the expression above quoted, and said further that the rule adopted here was being put into practice by rubber manufacturers elsewhere. At best, the tire makers can only show their goods. The nature of the improvements upon them are such that, unlike the improvements in automobiles, they are not at once apparent. There are no new escape valves or other outward evidences of superiority to catch, at once, the casual observers' attention.

Already, however, there is some talk of the exhibits to be made at the Louisiana Purchase exposition in St. Louis next year. Not only the tire manufacturers, but other local rubber concerns expect to be represented. One concern has already reserved space. Its exhibit will include a showing of all its several products. "But, after all," said a prominent rubber man, "an exhibit at the St. Louis fair will not be of much immediate account; it cannot be, in the rubber business. If we could show machinery in motion it would be worth while, but there is not much in a stack of belting, tires, and plain, everyday articles of manufacture, to attract attention."

* * *

THE Firestone Tire and Rubber Co. made their first tires in their own plant and with their own men, January 12, and were entirely successful. The company will keep their machinery going night and day to catch up with orders and accumulate goods in stock. They are making special efforts to enter the automobile field on a large scale, competing with solid tires against the more generally accepted pneumatics for road machines, and seeking to demonstrate that the solid tire is equally if not more desirable than the pneumatics.

The B. F. Goodrich Co. are now occupying their new five-story addition. On the fifth floor has been placed the machine-made hose department; on the fourth floor the hand-made hose department; and on the third floor the cotton hose department. The second floor will be a warehouse for staple manufactured goods to be made up in large quantities, insuring more prompt delivery on such orders than the company have been able to make heretofore. The first floor of the new building is occupied by the shipping department, and a belt line railroad, connecting with all the trunk lines entering Akron, passes the door. The space made vacant by the removal of the hose and shipping departments from the other buildings will be used for the extension of other departments which have long been in need of additional room.

The Goodyear Tire and Rubber Co. are moving into the three story addition lately completed, placing therein all their tire departments. The new structure will be entirely occupied by March 15, and it is expected during February and March to increase the number of employes by 200. The removal of the tire departments to the new building will make room for a great extension of the company's molded goods departments. Since December the Goodyear factory has been in operation night and day in the tire and the stock preparing departments.

William Cary has purchased the stock of A. D. Logan in the Lyon Rubber Co. and succeeds him as secretary and treasurer of the company. The Lyon company are devoting their main attention to gloves, claiming to produce a grease proof glove of exceptionally high merit. Mr. Logan will return to the grain and feed business with which he was formerly identified.

The Goodyear Tire and Rubber Co. will begin about Feb-

ruary 1 the manufacture of the Saunders compressed air golf ball. The remark has been made that the air is bound to escape from these balls if they are held in stock six months or more, but the company say that that difficulty has been anticipated and avoided and that a recent test showed that the driving power of balls made six months ago had not been impaired. To test the Saunders ball and make comparisons with others by the same device, the Goodyear company have erected in a large, open field near their factory a mechanical drive. The release of a powerful spring lets fly the drive, and the stroke is of the same force each time. It is the only way of testing the merits of different balls, it is claimed, as a man cannot strike with identically the same force twice in succession, or measure the exact strength let loose in a drive.

A. G. Spalding & Brothers (New York) have answered to the suit of the Haskell Golf Ball Co., alleging infringement of patent, in the United States circuit court for the southern district of New York. Spalding & Brothers deny the allegations of the petitioners, in general, make no admissions, and in substance ask the Haskell company to prove their claims.

Four new directors were elected at the reorganization of the India Rubber Co., at the annual meeting on January 14. The officers then chosen are: Lewis D. Parker, of Hartford, president; A. C. Wilson, of Chicago, vice-president; W. L. Wild, secretary, treasurer, and local manager. A. L. Dickinson, an office man of the company in Akron, and J. B. Kavanaugh, of Cleveland, together with the officers, constitute the new board of directors, Mr. Wilson being the only director re-elected. The India Rubber Co., were generally busy last year and are making alterations and extensions within their plant to improve their facilities and increase their capacity. The erection of additional buildings is contemplated, but no decision has been reached. Charles H. Wheeler, whose resignation as president of the India Rubber Co. was accepted, to take effect at the time of the annual meeting, is giving his attention to railway and other personal interests.

At the annual meeting of The B. F. Goodrich Co., on January 14, all the directors and officers were re-elected. The officers are: Colonel George T. Perkins, president; Bertram G. Work, first vice president; George W. Crouse, second vice president; R. P. Marvin, secretary; W. A. Folger, treasurer and assistant secretary; F. H. Mason, general manager of works; E. C. Shaw, general superintendent; C. C. Goodrich, assistant superintendent. Reports of the past year's business are understood to have been entirely satisfactory.

The Pure Gum Specialty Co. of Barberton, held their annual meeting on January 20, receiving reports of a very prosperous year. B. F. Tracy was re-elected president, also all other officers retained, as follows: H. F. Mitzel, vice-president and manager; R. F. Mitzel, secretary; W. A. Johnston, treasurer. The company are soon to employ a number of additional workmen, upon the occupancy of additions recently completed.

The Faultless Rubber Co. held their annual meeting on January 22 and re-elected all directors and officers. The latter are H. B. Camp, president; A. Vogt, vice-president; T. W. Miller, treasurer and manager; W. H. Muschlet, secretary; J. D. Slater, superintendent. The Faultless Co. enjoyed a large share of the past year's general prosperity, and have in view the taking on of new lines of goods.

At the annual meeting of the Lyon Rubber Co., on January 16, a practical rubber man, D. G. Armstrong, lately of the Republic Rubber Co. (Youngstown, Ohio), was made secretary and treasurer, succeeding W. L. Cary, who some time ago purchased the interest of A. D. Logan, one of the founders of the company, and became the secretary-treasurer. The other offi-

cers remain the same: James T. Diehm, president; O. G. Lyon, vice president. The company are vigorously pushing a new glove claimed to be grease-proof, and contemplate several extensions in the making of dipped and molded goods for the early future. The new secretary and treasurer was originally a B. F. Goodrich Co. employé.

The Summit Rubber Co., which began business last August, held their first annual meeting on January 15, re-electing their officers: J. D. Hollinger, president and treasurer; A. Warner, vice president; H. M. Hollinger, secretary; E. J. Schultz superintendent. The company report having made a prosperous beginning.

The Summit City Machine Co., who are making considerable progress in the rubber machinery line, though a comparatively new concern, have increased the number of their employés. At the annual meeting in January these officers were chosen: Simon Smith, president; Charles Frain, vice president; Charles Manbeck, treasurer; W. H. Snyder, general manager and secretary.

The Miller Rubber Manufacturing Co., at their annual meeting on January 19, elected Frederick Grether to the board of directors, succeeding Henry Berry. The officers are as before: Jacob Pfeiffer, president and treasurer; Lee R. Miller, vice president; William F. Pfeiffer, secretary.

The Colonial Rubber Co. have closed a contract with the Continental Caoutchouc- und Guttapercha-Compagnie, of Hanover, Germany, for the manufacture of the Swinehart cross-wire tires, exclusive rights being given for Germany, Holland, Denmark, and Norway and Sweden. J. A. Swinehart, vice president of the Colonial company, leaves about February 1 for Hanover, to install American machinery and help the German company get started in the manufacture of the tires. The Colonial company have now closed contracts covering all European countries—in which, outside of Great Britain they control the patents—excepting only Russia and Belgium. Mr. Swinehart will probably visit Russia with a view to making a royalty contract there before his return. Two concerns are reported to be desirous of obtaining the rights for Belgium. The Colonial company have had a prosperous year. At their annual meeting on January 15, they re-elected their officers: John Byrider, president; J. A. Swinehart, vice president; P. D. Hall, secretary and treasurer.

The Camp Rubber Co. are getting well under way in their new factory at Ashland, Ohio, and report good prospects.

The Stein Double Cushion Tire Co. have not yet completed their experiments and tests of their new "bike" wagon tire, but believe they will be in position to push it toward the front in time for this season's business.

E. L. Climes, of Akron, a former employé of The B. F. Goodrich Co., has associated himself with the Superior Rubber and Manufacturing Co. (Cuyahoga Falls), as superintendent. The company expect to be making dipped goods within a month, but will not be in full operation before the latter part of March. A. H. Harris, formerly a mechanical engineer of The B. F. Goodrich Co., has also become associated with the Superior company.

The India Rubber Co. are making a large number of 7 inch endless solid tires for use on steam trucks manufactured in America for shipment to England.

A. H. Noah, treasurer of the Diamond Rubber Co., was elected treasurer of the Portage Golf Club on January 20. The other officers are George G. Allen, president, and H. M. Houser, secretary. Local rubber men make up the larger part of the club's membership, and a number have been indulging in winter golf of late.

REVIEW OF THE CRUDE RUBBER MARKET.

THE situation in the crude rubber market is one of uncertainty. During most of January prices were firm, without material change from our last quotations. But the close of the month brings a decline, though Centrals and Africans are higher. Receipts at Pará during 1902 were 28,758 tons (including Caucho), against 30,290 in 1901. Receipts this season, up to January 27, were only 14,475 tons, against 17,460 tons to February 1 last year. The production of some other important rubber sorts has also fallen off. These facts, in connection with active consumption and exceptionally small visible supplies of Pará grades, should tend to advance prices, and indeed fine old rubber is quoted to-day 12 @ 13 cents higher than one year ago. But meanwhile much lower prices have ruled, and since the advance began consumers have bought less freely, in the hope of another decline.

Every branch of the industry appears to be well employed, with goods orders for work ahead, and unless the factories have more rubber in store than they are believed to have, more liberal buying must begin soon, with a stiffening effect upon prices. The higher rates for coarse Pará, with which the year opened have stimulated the buying of Centrals and Africans, which have gone up still further. Large purchases for American account have been made at the Antwerp inscriptions, where, on January 27, prices again showed an advance over brokers' valuations, though by no means so marked as at the two preceding auctions.

While the law of supply and demand in the long run fixes the price of crude rubber—as in the case of every other commodity—to the consumer, the operation of the law is not always immediate or direct. Else crude rubber should be higher than for a long time past. But the market may be affected temporarily by transactions of middlemen incident to the securing of rubber to cover orders, and the depression of prices at this moment may be due to such a cause. It must be remembered that low priced rubber at the prime markets—as Pará or Antwerp—is always desired by the importer, rather than high priced rubber, and efforts to check an advance are often attempted, though they can be only temporary in their influence, values being determined finally, in every market, by the pressure of the consuming demand. On the whole, therefore, it is probable that the rubber manufacturers have given notice of an advance on their goods none too soon.

New York quotations on January 30 were:

PARÁ.		CENTRALS.	
Islands, fine, new....	83 @84	Lopori ball, prime....	78 @79
Islands, fine, old....	88 @89	Lopori strip, do....	76 @77
Upriver, fine, new....	86 @87	Ikelemba.....	80 @81
Upriver, fine, old....	91 @92	Madagascar, pinky....	77 @78
Islands, coarse, new....	53 @54	CENTRALS.	
Islands, coarse, old....	@	Esmeralda, sausage....	69 @70
Upriver, coarse, new....	71 @72	Guayaquil, strip....	62 @63
Upriver, coarse, old....	@	Nicaragua, scrap....	68 @69
Caucho (Peruvian) sheet	56 @57	Panama, slab....	58 @60
Caucho (Peruvian) ball	69 @70	Mexican, scrap....	67 @68
AFRICAN.		Mexican, slab....	58 @60
Sierra Leone, 1st quality	77 @78	Mangabeira, sheet....	49 @50
Massai, red.....	77 @78	EAST INDIAN.	
Benguella.....	63 @64	Assam.....	None here.
Cameroon ball.....	58 @59	Borneo.....	38 @52
Gaboon flake.....	34 @35	GUTTA-PERCHA.	
Gaboon lump.....	36 @37	Prime, red.....	@2 25
Niger paste.....	20 @21	Prime, white.....	@1 50
Accra flake.....	20 @21	Lower grades.....	75 @1.25
Accra buttons.....	58 @59	Reboiled, prime.....	75 @.90
Accra strips.....	59 @60	Reboiled, inferior.....	10 @.25

Late Pará cables quote:

	Per Kilo.		Per Kilo.
Islands, fine.....	5\$40	Upriver, fine.....	6\$250
Islands, coarse.....	2\$800	Upriver, coarse.....	4\$750
Exchange, 11 3/4 d.			

Last Manáos advices:

Upriver, fine.....	6\$000	Upriver, coarse.....	4\$100
Exchange, 11 3/4 d.			

NEW YORK PRICES FOR DECEMBER (NEW RUBBER).

	1902.	1901.	1900.
Upriver, fine.....	8c @91	85 @87	92 @95
Upriver, coarse.....	65 @73	65 @66	67 1/2 @69
Islands, fine.....	74 @88	79 @81	86 @89
Islands, coarse.....	49 @60	48 @51	53 @54 1/2
Cametá, coarse.....	54 @61	50 @51	54 @56

In regard to the financial situation, Albert B. Beers (broker in India-rubber, No. 58 William street, New York) advises us:

"As usual for the month of January, the money market started very firm, with high rates for such small amount of paper as could be placed, but since the middle of the month rates have gradually eased, and are now about 5 1/2 per cent. for the best rubber paper, and 5 1/4 @ 6 per cent. for that not so well known."

Rubber Scrap Prices.

NEW YORK quotations—prices paid by consumers show no increase over the figures reported last month:

Old Rubber Boots and Shoes—Domestic.....	7 1/2 @ 7 3/4
Do —Foreign.....	6 1/2 @ 6 3/4
Pneumatic Bicycle Tires.....	5 1/4
Solid Rubber Wagon and Carriage Tires.....	6 1/2
White Trimmed Rubber.....	9 1/2 @ 9 3/4
Heavy Black Rubber.....	4 1/4
Air Brake Hose.....	2 1/4 @ 2 3/4
Fire and Large Hose.....	2 1/2
Garden Hose.....	1 1/2
Matting.....	1

United States Crude Rubber Imports—Official.

	1900.	1901.	1902.
United Kingdom.....pounds	7,640,073	6,802,372	7,604,134
Germany.....	1,428,339	1,832,558	2,393,998
Other Europe.....	6,124,247	9,400,127	7,220,369
Central America.....	1,363,131	1,247,517	1,062,184
Mexico.....	302,960	267,565	263,181
West Indies.....	35,125	42,844	47,355
Brazil.....	30,571,680	33,719,709	30,504,703
Other South America.....	1,161,897	1,336,131	1,230,902
East Indies.....	600,306	455,870	509,609
Other countries.....	49,425	38,117	29,467
Total.....pounds	49,337,183	55,142,810	50,865,902
Exports.....	3,849,276	3,725,558	3,264,620
Net imports.....	45,487,907	51,317,252	47,601,282
Value of imports.....	\$28,577,789	\$28,120,218	\$25,160,391
Av. Value per pound.....	58 cents.	51 cents.	49.4 cents.

Gutta-Percha.

WEISE & Co. (Rotterdam) report the following exports from Singapore for the first eleven months of four years past:

Tons.....	1899.	1900.	1901.	1902.
	6508	5740	5214	3898

The *Public Ledger*, of London, gives a statement of prices of Gutta-percha in that market at the end of 1902, in connection with which we present the equivalent values in United States currency. The same figures, by the way, were given by the same journal at the end of 1901. The figures follow:

Good to fine.....pound	4s 9d to 8s. 6d = \$1.155 to \$2.068
Low to medium.....	5d to 4s. 6d = .101 to 1.005

Statistics of Para Rubber (Excluding Caucho).

	NEW YORK.			Total 1900.	Total 1901.	Total 1902.
	Fine and Medium.	Coarse.				
Stocks, November 30... tons	160	11	=	171	535	579
Arrivals, December.....	852	470	=	1322	1019	1858
Aggregating.....	1012	481	=	1493	1554	2437
Deliveries, December.....	945	476	=	1421	1070	1779
Stocks, December 31..	67	5	=	72	484	658

	PARÁ.			ENGLAND.		
	1902.	1901.	1900.	1902.	1901.	1900.
Stocks, Nov. 30... tons	155	410	610	1200	885	950
Arrivals, December...	2990	3545	3145	785	1241	530
Aggregating....	3145	3955	3755	1985	2126	1480
Deliveries, December...	2780	3305	3095	1100	827	700
Stocks, Dec. 31..	365	150	660	885	1299	780

World's supply, December 31..... tons	3188	4432	3660
Pará receipts, July 1 to December 31.....	11,576	12,689	10,736
Pará receipts of Caucho, same dates.....	694	946	564
Afloat from Pará to United States, Dec. 31..	855	1078	450
Afloat from Pará to Europe, December 31..	1011	1120	1120

Following is a comparison of estimates from six sources, American and foreign, of the visible supplies of Pará rubber on January 1. The first column contains the statistics, prepared for THE INDIA RUBBER WORLD, which do not embrace Caucho. The different results arrived at by the other statisticians apparently are due in part to their inclusion of Caucho in reporting stocks, though this would not account for all the difference:

DETAILS.	I.	II.	III.	IV.	V.	VI.
Stocks, New York..	72	75	75	75	122	73
Stocks, England....	885	939	895	940	944	900
Stocks, Pará.....	365	410	410	410	415	
Afloat, New York...	855	880	880	880	894	2680
Afloat, Europe....	1011	1060	1060	1060	1011	
Total....	3188	3364	3320	3365	3386	3653

AVERAGE OF SIX TABLES, 3379 TONS.

Bordeaux.

THIS port is steadily gaining in importance as a rubber market due in part to the extensive investments of French capital in the African trade, and also to the excellent shipping communications with the West African coast. The house of R. Henry supplies the following comparison of imports at Bordeaux for the past two years:

British Official Returns.

	INDIA-RUBBER.		
	1900.	1901.	1902.
Imports..... pounds	57,488,032	52,245,688	46,970,000
Exports.....	32,885,888	32,604,704	32,676,112
Net Imports.....	25,602,144	19,340,384	14,293,888
Value of Imports....	£6,986,153	£5,830,224	£5,180,268
Value of Exports....	£3,808,472	£3,602,723	£3,551,866
Value Net Imports....	£3,177,661	£2,227,501	£1,629,402
Av. value Imports per pound.	2s. 5½d.	2s. 2½d.	2s. 2½d.

(One disturbing feature in these calculations—but only a slight one—is the fact that some imports of waste (especially from Russia) continue to be recorded in British imports of raw India-rubber.)

	GUTTA-PERCHA.		
	1900.	1901.	1902.
Imports..... pounds	14,118,608	9,605,056	9,395,568
Exports.....	1,709,792	1,224,832	1,160,784
Net Imports.....	12,408,816	8,680,224	8,204,784
Value of Imports....	£1,635,768	£1,382,646	£1,150,702
Value of Exports....	£146,689	£143,900	£135,514
Value Net Imports....	£1,539,079	£1,238,646	£1,015,188
Av. value Imports per pound.	2s. 4½d.	2s. 9½d.	2s. 5½d.

	1901.	1902.
Soudan and Conakry rubbers..... kilos	270,000	485,000
Cassamance.....	65,000	132,800
Grand Bassam.....	5,000	26,800
Madagascar.....		3,500
New Caledonia.....	3,000	2,500
Mexican.....		4,500
Mayumba.....		4,100
Java.....	5,000	1,700
Lahou.....		3,000
Total..... kilos	348,000	664,900

RANGE OF PRICES DURING 1902.

Soudan and Conakry twists..... francs	6.60@7.75
Soudan niggers.....	5.50@7.65
Conakry niggers.....	6.00@8.35
Cassamance, AP-A, AM, and B.....	3.80@8.25
Grand Bassam lumps.....	3.70@5.80
Grand Bassam cakes.....	4.25@6.70
Grand Bassam niggers.....	5.50@6.
Mexican.....	5.25@6.50
Mayumba.....	3.90@5.35
Madagascar, pinky.....	6.80@6.95
Madagascar niggers.....	3.50@5.50
Java.....	6.75@7.25
New Caledonia.....	7.25@8.

For some special lots of Soudan twists 8 francs was paid and for Conakry niggers, 8.95 francs per kilogram.

P. CHAUMEL, formerly a broker in Caoutchouc and other colonial products, has become a member of the firm R. Henry, successors to Jules Pichard, as manager of their department of colonial products.

Rotterdam Rubber Statistics, 1902.

[Supplied by WHEIS & Co.]

INDIA-RUBBER ARRIVALS (KILOS)

Thimbles, red.....	159,500	Soudan.....	11,550
Congo ball.....	14,400	All other.....	14,800
Kassai, red.....	364,700		
Kassai, black.....	31,500	Total, 1902.....	991,700
Upper Congo.....	329,650	Total, 1901.....	853,250
Sierra Leone.....	18,000	Total, 1900.....	877,450
Mozambique.....	27,400	Total, 1899.....	804,750
Java and Sumatra.....	29,200	Total, 1898.....	656,400

	1903.	1902.	1901.	1900.	1899.
Stocks, January 1....	8,100	67,300	80,600	38,900	36,100

BALATA ARRIVALS (KILOS.)

	1902.	1901.	1900.	1899.	1898.
Surinam sheet....	244,500	211,950	161,600	95,200	76,800
Venezuela block..	30,700	31,450	23,500	52,200	158,800
Total.....	275,200	243,400	185,100	147,450	238,600
Stocks, end year	2,000			5,000	

GUTTA-PERCHA (TONS).

	1902.	1901.	1900.	1899.	1898.
Stocks beginning of year....	263	185	307	180	130
Arrivals during year.....	267	314	280	495	265
Aggregating.....	530	499	587	675	395
Sales during year.....	312	236	402	368	215
Stocks end of year.....	218	263	185	307	180

Rubber Receipts at Manaus.

DURING December and for the first six months of the crop season, and compared with former years (by courtesy of Messrs. Witt & Co.):

FROM—	DECEMBER.			JULY-DECEMBER.		
	1902.	1901.	1900.	1902.	1901.	1900.
Rio Purús..... tons	467	468	257	1915	2339	1712
Rio Madeira.....	166	279	245	1300	1610	1448
Rio Jurua.....	337	408	526	789	1593	910
Rio Javary—Iquitos.....	441	290	294	995	885	679
Rio Solimões.....	324	275	160	922	1047	599
Rio Negro.....	109	66	75	199	95	98
Total.....	1844	1786	1557	6120	7569	5446
Caucho.....	185	280	140	600	1096	541
Total.....	2029	2066	1697	6720	8665	5987

Para.

UNDER date of December 31, 1902, is notified the dissolution of the commission firms of Cmok, Prülse & Co. (Pará) and Prülse, Dusendschön & Co. (Manãos), through the retirement of Mr. O. P. F. Prülse, who returns to Wiesbaden, Germany. The business at Pará will be continued under the firm style of Cmok, Schrader & Co., and at Manãos as Dusendschön & Co. The firm members now are Messrs. Oscar F. A. Dusendschön, Wilhelm Richard Schrader, and Franz Hermann Cmok, with Heilbut, Symons & Co. (London and Liverpool) as special partners. The capital employed is 1,200,000 milreis.

Hamburg.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Transactions have been in small proportions, but quotations show an advance over the past week. The following prices have been paid (in marks per kilogram):

Pará fine, hard cure, spot 8.65@8.85	Colombian scrap.....6.40@6.50
Do future 8.60@8.75	Salvador scrap.....6.70@6.80
Pará medium, hard cure, future.....8.30@8.45	Salvador strips.....5.75@5.80
Bolivian future.....8.20@8.25	Mozambique ball
Manãos scrappy negro heads.....7.10@7.15	"Donde".....7.50@7.70
Peruvian balls.....7.10@7.15	Mozambique ball
Mattogrosso sheets.....5.50@5.60	"Mahenge".....7.40@7.50
Santos sheets.....5.20@5.25	Massai niggers.....7.25@7.35
Ecuador scrap.....6.75@6.90	Gambia niggers.....5.90@6.00
	Borneo I and II.....5.40@5.50
	Borneo III.....2.25@2.30

Hamburg, January 17, 1903.

London.

EDWARD TILL & CO., January 1, report stocks:

	1903.	1902.	1901.
LONDON { Pará sorts..... tons —	—	—	—
{ Borneo..... 55	144	220	
{ Assam and Rangoon..... 2	52	30	
{ Other sorts..... 175	442	788	
Total.....	232	638	1038
LIVERPOOL { Pará..... 894	1302	776	
{ Other sorts..... 456	854	1087	
Total, United Kingdom.....	1582	2794	2901
Total, December 1.....	2083	2525	3061
Total, November 1.....	2337	2602	3040
Total, October 1.....	2464	2802	2846

PRICES PAID DURING DECEMBER.

	1902.	1901.	1900.
Pará fine, hard.....3/4 3/4 @3/10	3/7	3/9 1/4 @3/10	
Do soft.....3/1 1/2 @3/8 1/4	3/4 3/4 @3/6 1/4	3/9 1/4 @4/-	
Negroheads, Islands 2/1 1/2 @2/6 1/2	2/0 1/2 @2/1	2/1 1/2	
Do scrappy 2/9 @3/1	2/7 @2/9	2/9 1/4 @2/10	
Bolivian.....3/7 @3/10	3/7 1/4 @3/9	No sales	

JANUARY 16.—The market for Pará continues quiet, with sellers of fine hard spot and forward at 3s. 11d. Ten tons March April delivery sold to day at 3s. 10 3/4 d. Negroheads firm, with sales of scrappy at 3s. 2d. @ 3s. 1 1/2 d.; Cametás have been in good demand with fair sales for near delivery 2s. 7d.; Islands sold at 2s. 6 1/4 d. @ 2s. 6d. Peruvians quiet, with small sales of ball at 3s. 1 1/2 d. @ 3s. 1 1/4 d. forward and further sellers. Fine Mollendo buyers at 3s. 8d. Medium grades continue scarce and in good demand. No auctions have been held to day.

Liverpool.

WILLIAM WRIGHT & Co. report [January 1]:

Fine Pará.—Under the combined influence of short receipts and "bear" covering, the market has been strong and active, and an advance of 5d. @ 5 1/2 d. per pound has been registered. The chief features of this advance have been the comparatively small amount of speculation, and the fact that the rise in price was largely due to the shortage in good medium grades. The early winter in the United States has also had some effect. As regards the future, it is difficult to predict what will happen; the Pará receipts will naturally be an important factor, but we believe there is still a considerable amount of "bear" sales to cover. A

temporary setback is quite possible, but an early return to recent level [lower] of prices does not seem probable. As compared with present prices of many grades of medium, fine Pará is still the cheapest rubber. *African.*—All descriptions have been in strong demand; several grades show a sharp advance has taken place. Stock of good qualities scarce and wanted.

EDMUND SCHLÜTER & CO. report [January 14]:

During the week we have experienced a somewhat spasmodic but advancing market in Pará sorts, with business in hard fine and spot at 3s. 10d., and February-March-April-May at 3s. 10 1/2 d. @ 3s. 11d., closing at the latter figure. A few cases of 1901 Bolivian were sold at 4s. 0 1/2 d. The price now wanted is 4s. 1d. @ 4s. 1 1/2 d. The demand for spot fine has been irregular at from 3s. 8 1/2 d. @ 3s. 9d. and 3s. 9 1/2 d. for February-March delivery. Medium kinds remain in good demand with limited offering. Sales at auction to-day included Sierra Leone twists at 3s. 1 1/2 d.; Manoh twists. 2s. 7 1/4 d.; large Gaboon ball, 2s. 4 1/2 d.; Loanga ball 2s. 4 1/2 d.; Pernambuco scrap, 1s. 9 1/2 d.; Sierra Leone negroheads 2s. 9 1/2 d.

Antwerp.

TO THE EDITOR OF THE INDIA RUBBER WORLD: Since our report of December 16 two inscription sales have taken place—on December 19, when 90 tons were offered and sold, and on January 2, when 42 tons were sold. The chief interest in the first inscription consisted in the sale of 62 tons prime Lopori at 8.30, 8.40, and 8.50 francs per kilogram, against an estimation of 7.70 francs. The average advance may be estimated at 3 1/4 to 4 per cent. on the preceding sale, or at 8 to 9 per cent. on estimations made before the sale of December 16. The sale of January 2 showed equally firm prices, the advance on estimations amounting to 2 1/2 per cent. for Congo rubber and about 3 per cent. for other African sorts. The next regular monthly sale will occur on January 27, when about 650 tons will be offered.

The year's arrivals at Antwerp showed a decrease of about 400 tons, compared with 1901, instead of which we doubtless should have had an increase if the agents of the Congo Free State and of the private companies had not been instructed to lay special stress on the improvement of the quality of rubber produced. The effect of these measures will be felt in the future, without doubt, in the improvement of prices in this market.

C. SCHMID & CO.

Antwerp, January 13, 1903.

KARCHER & Co. reported, in advance of the sale of January 27, when 622 tons were to be offered, the following principal lots, with the brokers' estimation (in francs per kilogram):

Kilos.	Grades.	Value.	Kilos.	Grades.	Value.
8,759	Equateur.....	8.50	15,101	Kassai.....	7.75
14,131	Equateur.....	8.25	31,937	Do red.....	7.50
11,564	Upper Congo.....	7.85	19,525	Do red.....	7.75
6,981	Low Congo thimbles	6.25	14,262	Lomami.....	7.95
9,704	Do red.....	4.00	11,418	Lake Leopold II..	6.75
34,675	Uelé.....	7.65	27,599	Aruwimi.....	7.50
35,782	Aruwimi.....	7.75	22,521	Mongalla.....	7.50
8,063	Isangi.....	7.85	37,387	Wamba.....	4.75
51,317	Mongalla.....	7.75	11,873	Do.....	4.40

GRISAR & Co.'s annual review for 1902 shows smaller arrivals in this market than during 1900 or 1901, though larger than for any preceding year. The following comparison shows the sources of rubber imports for three years past:

	1900.	1901.	1902.
Congo Free State.....kilos.	4,902,003	5,417,456	4,992,954
Other countries.....	796,032	431,746	411,031
Total.....	5,698,035	5,849,202	5,403,985

It is pointed out that in spite of the considerable importations during the year, the prices obtained were higher for many grades than during the preceding year, while prices of Pará rubber had shown a decline. This fact is explained by the great vogue which Congo rubbers have enjoyed, proving them

to be indispensable to the rubber industry. The imports at Antwerp doubtless would have been greater but for the special efforts made during the year to bring about an improvement in the methods of handling Congo rubbers, and thus securing a higher standard of quality. Repeated instructions have been communicated by the government of the Congo Free State and by the rubber trading companies to their agents to demand from the natives greater care in the preparation of rubber rather than the greatest possible quantity. Very noticeable results have already been obtained, but not without having caused a momentary diminution of production. The same policy has been pursued by the large Compagnie du Kassaï, constituted during the year through the amalgamation of certain *concessionnaire* companies, and which is now resuming operations in Africa after some months of inactivity in the district under its control. Important shipments are now under way from the Kassaï, and the hope is entertained that an improvement in quality will be shown in the product from that district. With a view to preventing the exhaustion of rubber supplies, the government has adopted measures to secure the planting of new vines, the result of which is noted elsewhere in this paper. Thanks to these various measures, the future of the trade is looked to with confidence. During the year the first shipments of rubber were received from the Katanga region. This rubber was at first very unsatisfactory, but the later shipment showed remarkable improvement in quality and some fine lots have brought from 7.50 to 7.90 francs per kilogram.

COMPARATIVE PRICES—EXTREMES.

GRADES.	1900.	1901.	1902.
Kassaï, red.	9.00-10.30	8.25-9.00	7.50-8.75
Equateur.	7.30-10.02½	7.25-8.50	6.80-8.75
Lopori.	7.90-10.62½	7.25-8.50	6.80-8.75
Uelè.	7.35-9.90	6.85-7.45	5.42½-8.15
Aruwimi.	7.00-9.50	5.50-7.50	5.40-8.45
Upper Congo, ordinary.	7.90-10.00	7.10-7.90	6.65-7.95
Lower Congo thimbles.	3.85-6.17½	2.80-4.02½	4.70-4.25
Fine Pará.	37.10d.-47.8d	32.6d.-32.10d	22.11d.-32.

ANTWERP RUBBER STATISTICS FOR DECEMBER.

DETAILS.	1902.	1901.	1900.	1899.	1898.
Stocks, Nov. 30. <i>kilos</i>	185,961	843,301	1,064,640	179,778	270,315
Arrivals in December	799,236	204,920	170,135	319,351	220,869
Congo sorts	260,150	183,525	151,726	269,879	193,671
Other sorts	539,086	221,395	218,409	49,472	27,198
Aggregating	935,197	1,048,221	1,234,781	499,129	491,184
Sales in December	327,092	633,412	620,742	207,138	227,844
Stocks, Dec. 31	658,105	414,709	614,039	391,991	263,340
Arrivals since Jan. 1	5,403,985	5,849,212	5,698,035	3,402,880	2,014,501
Congo sorts	4,092,054	5,417,456	4,602,003	2,881,506	1,714,305
Other sorts	1,311,931	431,756	796,032	521,374	300,196
Sales since Jan. 1	5,160,589	6,048,442	5,375,987	3,374,229	1,845,714

PARA RUBBER VIA EUROPE.

DEC. 15.—By the <i>Monnetonka</i> =London:	
Reimers & Co. (Fine)	23,000
DEC. 26.—By the <i>Colite</i> =Liverpool:	
Reimers & Co. (Fine)	23,000
DEC. 30.—By the <i>Saxonia</i> =Liverpool:	
Reimers & Co. (Fine)	44,500
Reimers & Co. (Coarse)	57,000 101,500
JAN. 2.—By the <i>Teutonia</i> =Liverpool:	
George A. Alden & Co. (Fine)	19,000
Edmund Reeks & Co. (Cauchó)	13,500 32,500

PARA—Continued.

JAN. 5.—By the <i>Umbria</i> =Liverpool:	
Poel & Arnold (Fine)	2,000
Poel & Arnold (Coarse)	72,000 74,000
JAN. 6.—By the <i>Segurona</i> =Mollendo:	
New York Commercial Co. (Fine)	5,500
New York Commercial Co. (Coarse)	2,000 7,500
JAN. 10.—By the <i>Germanie</i> =Liverpool:	
A. T. Morse & Co. (Cauchó)	7,000
JAN. 13.—By the <i>Iternia</i> =Liverpool:	
Poel & Arnold (Fine)	33,000
Poel & Arnold (Coarse)	10,000 43,000

PARA—Continued.

JAN. 14.—By the <i>Bovic</i> =Liverpool:	
Poel & Arnold (Coarse)	11,500
JAN. 17.—By the <i>Condor</i> =Mollendo:	
John M. Parr's Sons (Fine)	22,500
John M. Parr's Sons (Coarse)	2,000
New York Commercial Co. (Fine)	2,500
New York Commercial Co. (Coarse)	1,100 28,100
JAN. 19.—By the <i>Lucania</i> =Liverpool:	
Poel & Arnold (Fine)	26,000
Poel & Arnold (Coarse)	1,500
George A. Alden & Co. (Fine)	43,000 101,500
JAN. 19.—By the <i>Cymric</i> =Liverpool:	
Poel & Arnold (Fine)	25,000
William Wright & Co. (Fine)	4,500 29,500

RUBBER ARRIVALS AT ANTWERP.

DEC. 19.—By the <i>Albertville</i> , from the Congo:	
Bunge & Co. (Société Générale Africaine) <i>kilos</i>	187,226
Do (Comité Spécial Katanga)	1,010
Do (Chemins de fer des Grand Lacs)	2,800
Do (Société Anversoise)	36,296
Comptoir Commercial Congolais	80,000
M. S. Cols.	15,000
Do	1,000
Comptoir des Produits Coloniaux (Cie. de la M'Goko)	3,950
Do (Cie. de la Kadei Sangha)	6,400
Do (Cie. du Kassaï)	6,700
W. Mallinckrodt & Co. (Alimaïenne)	5,000
Société Coloniale Anversoise	3,200
Do (Belge du Haut Congo)	6,600 355,182
JAN. 8.—By the <i>Anversoise</i> , from the Congo:	
Société Coloniale Anversoise (Cie. du Kassaï) <i>kilos</i>	15,500
Do (Société La Lulonga)	5,000
Do (Sud Kamerun)	7,000
Do (Belge du Haut Congo)	15,500
Do	2,000
Bunge & Co. (Société Générale Africaine)	82,392
Do (Société Anversoise)	37,000
Do	223
Cie. Commerciale des Colonies	4,100
M. S. Cols. (Société L'Ikeltmba)	800 169,515

IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

January 2.—By the steamer *Basil*, from Manáos and Pará:

IMPORTERS.	Fine.	Medium.	Coarse.	Cauchó.	Total
A. T. Morse & Co.	97,900	33,000	101,900	.....	232,800
New York Commercial Co.	97,500	35,200	34,200	1,400	168,300
Edmund Reeks & Co.	65,100	14,100	15,500	.....	94,700
Poel & Arnold	45,300	17,500	19,800	1,200	83,800
United States Rubber Co.	.....	.....	44,400	4,200	48,600
William Wright & Co.	6,400	300	21,500	.....	28,200
L. Hagenaers & Co.	8,100	.....	4,300	.....	12,400
Robinson & Tallman	7,500	1,300	2,000	.....	10,800
G. Amsinck & Co.	5,000	300	700	300	6,300
Total	332,800	101,700	244,300	7,100	685,900

January 14.—By the steamer *Hubert*, from Manáos and Pará:

New York Commercial Co.	264,200	57,600	127,600	.....	449,400
Poel & Arnold	112,500	63,500	42,100	32,000	250,100
A. T. Morse & Co.	102,200	10,400	35,600	.....	148,200
William Wright & Co.	64,800	9,200	51,700	.....	125,700
United States Rubber Co.	3,800	2,200	48,300	300	54,300
Edmund Reeks & Co.	24,200	5,700	8,100	2,700	40,700
Kramrich & Co.	.....	.....	26,000	.....	26,000
Hagemeyer & Brunn	5,100	7,400	2,200	.....	17,700
L. Hagenaers & Co.	8,600	.....	2,200	.....	10,800

Total.....588,400 156,000 343,500 35,000=1,122,900

January 23.—By the steamer *Amazonense* from Manáos and Pará:

New York Commercial Co.	287,600	52,100	153,800	1,000	494,500
Poel & Arnold	151,500	62,800	126,200	28,300	368,800
William Wright & Co.	74,600	15,200	108,900	.....	198,700
United States Rubber Co.	81,300	13,400	63,900	13,900	172,500
A. T. Morse & Co.	97,900	12,700	58,200	.....	168,800
Edmund Reeks & Co.	31,600	2,700	7,000	.....	41,300
L. Hagenaers & Co.	13,900	400	8,000	.....	22,300
H. A. Gould Co.	.....	300	1,300	.....	1,600

Total.....738,400 159,600 527,300 43,200=1,468,500

[NOTE.—The steamer *Bernard*, from Pará, is due at New York February 1, with 150 tons Rubber and 25 tons Cauchó. The *Maranhense* was due to sail from Pará for New York January 28 or 29.]

OTHER ARRIVALS AT NEW YORK

CENTRALS.

DEC. 23.—By the <i>Alliance</i> =Colon:	POUNDS.
G. Amsinck & Co.	8,200
J. A. Paul & Co.	5,300
A. Santos & Co.	4,500
Lawrence Johnson & Co.	4,800
E. B. Strout	4,800
D. A. De Lima & Co.	4,000
Dumarest & Co.	3,400
American Trading Co.	2,600
Isaac Brandon & Bros.	2,400
K. Schettlin & Co.	1,700
Mecke & Co.	1,600
Jimenez & Escobar	1,300
Livingstone & Co.	700
Andress & Co.	100
Landman & Kemp	400
Ascensio & Cossio	200
For Europe	2,700 48,600

DEC. 25.—By the <i>Carth 24</i> =Truxillo:	POUNDS.
Eggers & Heinlein	8,600
J. W. Wilson & Co.	1,500
H. W. Peabody & Co.	900
G. Amsinck & Co.	700
A. S. Lascellas & Co.	400 12,100

DEC. 26.—By the <i>El Valle</i> =New Orleans:	POUNDS.
Eggers & Heinlein	2,000
A. T. Morse & Co.	1,500 3,500

DEC. 29.—By the <i>Sencen</i> =Mexico:	POUNDS.
American Trading Co.	3,500
Graham, Hinkley & Co.	1,000
L. N. Chemedlin & Co.	1,000
H. Marquardt & Co.	500
E. Steiger & Co.	500
Harburger & Stack	500 6,000

DEC. 30.—By the <i>Louisiana</i> =New Orleans:	POUNDS.
T. N. Morgan	1,500

DEC. 30.—By the <i>Valencia</i> =Greytown:	POUNDS.
Kunhardt & Co.	8,000
Livingstone & Co.	7,000
G. Amsinck & Co.	4,000
E. B. Strout	2,500
A. D. Straus & Co.	2,000
C. Wessels & Co.	900
Lawrence Johnson & Co.	800
Sampers & Co.	800 26,000

DEC. 30.—By the <i>Saxonia</i> =Liverpool:	POUNDS.
A. T. Morse & Co.	11,200

DEC. 30.—By the <i>Finance</i> =Colon:	POUNDS.
Hirzel, Feltman & Co.	8,000
Piza, Nephews & Co.	5,800
Andreas & Co.	4,800
Isaac Brandon & Bros.	2,900
A. D. Straus & Co.	1,700
L. N. Chemedlin & Co.	1,300
G. Amsinck & Co.	1,100
Lawrence Johnson & Co.	900
Eggers & Heinlein	800 28,800

JAN. 3.—By the <i>El Paso</i> =New Orleans:	POUNDS.
Manhattan Rubber Mfg. Co.	4,000
A. N. Rotholz	2,500
A. T. Morse & Co.	1,000 7,500

JAN. 5.—By the <i>Monterey</i> =Mexico:	POUNDS.
E. Steiger & Co.	1,500
H. Marquardt & Co.	1,200
P. Harmony, Nephews Co.	700
Samuels Brothers	500
Theband Brothers	300 4,200

JAN. 6.—By the <i>Proteus</i> =New Orleans:	POUNDS.
A. T. Morse & Co.	3,500
A. N. Rotholz	1,500
Eggers & Heinlein	1,500 6,500

JAN. 6.—By the <i>Segurana</i> =Colon:	POUNDS.
Hirzel, Feltman & Co.	29,000
Lawrence Johnson & Co.	6,000
G. Amsinck & Co.	3,700
A. Santos & Co.	3,400
Isaac Brandon & Bros.	3,500
Dumarest & Co.	3,000
E. B. Strout	2,200
Harburger & Stack	900
R. G. Barthold	300 55,000

JAN. 7.—By the <i>Revelus</i> =Bahia:	POUNDS.
J. H. Rossbach & Bros.	22,500
Booth & Co.	1,000 23,500

JAN. 12.—By the <i>Havana</i> =Mexico:	POUNDS.
E. Steiger & Co.	1,000
Graham, Hinkley & Co.	600
H. Marquardt & Co.	800
For Europe	1,500 3,900

JAN. 13.—By the <i>Jarvis</i> =Liverpool:	POUNDS.
United States Rubber Co.	23,000

CENTRALS—Continued.

JAN. 12.—By the *Comus*=New Orleans:

A. T. Morse & Co. 2,000

JAN. 13.—By the *Allegany*=Greytown:

A. D. Straus & Co. 5,000

Andreas & Co. 3,000

E. B. Strout 1,500

Livingstone & Co. 700

Lawrence Johnson & Co. 700

Kunhardt & Co. 260

Roldan & Van Sickle 160 11,260

JAN. 13.—By the *City of Washington*=Colon:

Hirzel, Feltman & Co. 21,000

Piza, Nephews & Co. 5,600

G. Amsinck Co. 3,000

Eggers & Heinlein 2,200

M. A. de Leon 1,800

L. N. Chemedlin & Co. 1,500

Fred. Probst & Co. 603

A. M. Capen Sons 400 36,000

JAN. 16.—By the *El Valle*=New Orleans:

Manhattan Rubber Mfg. Co. 3,000

Eggers & Heinlein 1,000

Kunhardt & Co. 500 4,500

JAN. 17.—By the *Esperanza*=Mexico:

Smithers, Nordenholt & Co. 1,500

P. Harmonys Nephews Co. 700

H. Marquardt & Co. 1,000 3,200

JAN. 19.—By the *Sallust*=Bahia:

Booth & Co. 3,700

J. H. Rossbach & Bros. 2,300 5,900

JAN. 20.—By the *Alliance*=Colon:

Isaac Brandon & Bros. 7,000

G. Amsinck & Co. 6,900

A. Santos & Co. 5,600

Hirzel, Feltman & Co. 3,200

Dumarest & Co. 2,200

D. A. De Lima & Co. 2,100

E. B. Strout 2,000

Trame & Co. 1,100

American Trading Co. 1,100

Harburger & Stack 800

Lawrence Johnson & Co. 500

United Fruit Co. 500 33,000

JAN. 22.—By the *Tennyson*=Bahia:

J. H. Rossbach & Bros. 18,000

Booth & Co. 6,000 23,000

JAN. 23.—By the *El Paso*=New Orleans:

A. T. Morse & Co. 1,000

G. Amsinck & Co. 4,000

Eggers & Heinlein 300 5,300

AFRICANS.

POUNDS.

DEC. 22.—By the *British Prince*=Antwerp:

Otto Meyer (Boston) 7,000

DEC. 23.—By the *Kroonland*=Antwerp:

Reimers & Co. 22,000

Otto Meyer (Boston) 12,500

A. T. Morse & Co. 8,000 42,500

DEC. 26.—By the *Celtic*=Liverpool:

Reimers & Co. 21,000

DEC. 29.—By the *Minnehah*=London:

A. T. Morse & Co. 4,500

DEC. 29.—By the *St. Andrew*=Antwerp:

Otto Meyer (Boston) 12,000

DEC. 29.—By the *La Champagne*=Havre:

A. T. Morse & Co. 6,400

DEC. 30.—By the *Belgravia*=Hamburg:

Reimers & Co. 75,000

A. T. Morse & Co. 19,000 91,000

DEC. 30.—By the *Zeeland*=Antwerp:

A. T. Morse & Co. 225,000

Reimers & Co. 36,500

George A. Alden & Co. 19,000 280,500

DEC. 30.—By the *Saxonia*=Liverpool:

George A. Alden & Co. 50,000

Otto Meyer (Boston) 15,000

Reimers & Co. 13,500

United States Rubber Co. 10,000

A. T. Morse & Co. 5,000

Robinson & Tallman 2,000 95,500

DEC. 31.—By the *Potsdam*=Rotterdam:

Reimers & Co. 12,500

JAN. 2.—By the *Teutonic*=Liverpool:

Poel & Arnold 11,500

Otto Meyer (Boston) 8,000

George A. Alden & Co. 4,500 24,000

JAN. 2.—By the *Graf Waldersee*=Hamburg:

A. T. Morse & Co. 32,000

Poel & Arnold 15,000 47,000

AFRICANS—Continued.

JAN. 2.—By the *Patricia*=Lisbon:

George A. Alden & Co. 22,000

Poel & Arnold 22,000 44,000

JAN. 5.—By the *Umbria*=Liverpool:

Poel & Arnold 13,500

A. T. Morse & Co. 16,000 29,500

JAN. 7.—By the *British King*=Antwerp:

Otto Meyer (Boston) 12,000

George A. Alden & Co. 4,500 56,500

JAN. 7.—By the *Moltke*=Hamburg:

Otto Meyer (Boston) 10,000

A. T. Morse Co. 10,000

William Wright & Co. 5,000 25,000

JAN. 8.—By the *Finland*=Antwerp:

Poel & Arnold 160,000

George A. Alden & Co. 115,000

Joseph Cantor 22,500

A. T. Morse & Co. 9,000 306,500

JAN. 10.—By the *Germanie*=Liverpool:

George A. Alden & Co. 11,000

United States Rubber Co. 8,000

Poel & Arnold 50,000

A. T. Morse & Co. 2,500 71,500

JAN. 13.—By the *Ibernia*=Liverpool:

A. T. Morse & Co. 20,000

Robinson & Tallman 14,000

George A. Alden & Co. 2,500

Otto Meyer (Boston) 6,000 42,500

JAN. 14.—By the *Vaderland*=Antwerp:

A. T. Morse & Co. 14,000

JAN. 14.—By the *Boric*=Liverpool:

Poel & Arnold 14,000

JAN. 15.—By the *Lancaster*=Liverpool:

George A. Alden & Co. 22,500

JAN. 19.—By the *Lucania*=Liverpool:

George A. Alden & Co. 40,000

A. T. Morse & Co. 15,000

Poel & Arnold 7,000 62,000

JAN. 19.—By the *Pennsylvania*=Hamburg:

Otto Meyer (Boston) 50,000

Reimers & Co. 50,000

A. T. Morse & Co. 22,000 122,000

JAN. 22.—By the *Friesland*=Antwerp:

Joseph Cantor 2,500

JAN. 23.—By the *Patricia*=Hamburg:

George A. Alden & Co. 1,000

Otto Meyer (Boston) 16,500 31,500

EAST INDIAN.

POUNDS.

DEC. 27.—By the *Philadelphia*=London:

Reimers & Co. 6,000

DEC. 27.—By the *Lothian*=Singapore:

William Wright & Co. 2,000

DEC. 29.—By the *Minnehaha*=London:

Robinson & Tallman 13,000

JAN. 2.—By the *Graf Waldersee*=Hamburg:

Poel & Arnold 9,500

JAN. 5.—By the *St. Paul*=London:

Poel & Arnold 11,500

JAN. 5.—By the *Louther Castle*=Singapore:

William Wright & Co. 10,000

JAN. 5.—By the *Mesaba*=London:

Robinson & Tallman 37,000

JAN. 10.—By the *Germanie*=Liverpool:

Poel & Arnold 3,500

JAN. 17.—By the *St. Louis*=London:

Poel & Arnold 11,500

PONTIANAK.

DEC. 27.—By the *Lothian*=Singapore:

William Wright & Co. 15,000

Reimers & Co. 128,000

W. R. Russell & Co. 100,000

George A. Alden & Co. 52,000 492,000

JAN. 5.—By the *St. Paul*=London:

Poel & Arnold 9,500

GUTTA-PERCHA AND BALATA.

POUNDS.

DEC. 30.—By the *Belgravia*=Hamburg:

To order 6,000

JAN. 2.—By the *Graf Waldersee*=Hamburg:

E. Oppenheim 13,500

GUTTA PERCHA AND BALATA.—Continued.

JAN. 5.—By the <i>Lowther Castle</i> =Singapore:	
Robert Brauns & Co.....	5,500
JAN. 10.—By the <i>Germanie</i> =Liverpool:	
Earle Brothers.....	7,000

BALATA.

DEC. 29.—By the <i>Minnehaha</i> =London:	
Earle Brothers.....	2,500
DEC. 30.—By the <i>Prins Willem</i> =Surinam:	
George A. Alden & Co.....	500
For Europe.....	1,500
JAN. 16.—By the <i>Prins Willem</i> =Surinam:	
G. Amsinck & Co.....	1,000
Bailey, Billings & Co.....	200
JAN. 17.—By the <i>St. Louis</i> =London:	
Henry A. Gould Co.....	4,500

CUSTOM HOUSE STATISTICS.

PORT OF NEW YORK—DECEMBER.

Imports:	POUNDS.	VALUE.
India-rubber.....	4,652,780	\$2,488,325
Gutta-percha.....	6,750	4,437
Gutta-jelutong (Pontianak) ..	1,564,563	35,342
Total.....	6,214,093	\$2,528,104

Exports:

India-rubber.....	55,536	\$33,886
Reclaimed rubber.....	9,143	1,339
Rubber Scrap Imported.....	1,217,461	\$ 0,480

BOSTON ARRIVALS.

	POUNDS.
DEC. 3.—By the <i>Jora</i> =Liverpool:	
Otto Meyer—African.....	4,592
DEC. 3.—By the <i>Jora</i> =Liverpool:	
Reimers & Co.—African.....	19,069

DEC. 4.—By the <i>Cestrian</i> =Liverpool:	
Otto Meyer—African.....	1,730
DEC. 17.—By the <i>Sache</i> =Liverpool:	
Reimers & Co.—African.....	6,930
DEC. 22.—By the <i>Irenia</i> =Liverpool:	
Reimers & Co.—African.....	11,699
DEC. 24.—By the <i>Vaderland</i> =Antwerp:	
George A. Alden & Co.—African.....	67,909
[Included in New York arrivals Dec. 17.]	
DEC. 30.—By the <i>Kansas</i> =Liverpool:	
Reimers & Co.—Coarse Para.....	11,144
DEC. 30.—By the <i>Cambrian</i> =London:	
Reimers & Co.—East Indian.....	24,137
DEC. 31.—By the <i>Commenceville</i> =Liverpool:	
Kramrisch & Co.—African.....	11,213
Total Imports.....	149,410
[Value, \$75,848]	

EXPORTS OF INDIA-RUBBER FROM MANAOS DURING 1902.

BY COURTESY OF WITT & CO. [WEIGHTS IN KILOGRAMS.]

EXPORTERS.	NEW YORK.					LIVERPOOL.					HAVRE AND HAMBURG.					GRAND TOTAL.
	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	
Prüss, Dusendtschön & Co.....	994,981	381,350	339,453	297,628	2,013,412	1,200,651	184,243	175,028	429,692	1,989,617	139,974	52,800	30,000	24,571	247,465	4,250,334
Witt & Co.....	1,215,426	282,614	258,977	413,076	2,169,493	689,896	127,078	168,995	131,620	1,117,589	21,488	1,950	6,637	—	30,075	3,317,167
A. H. Alden.....	1,087,369	265,300	305,906	193,591	1,852,736	295,202	63,920	24,196	105,980	489,297	25,536	15,840	5,720	16,500	63,396	2,385,423
Andersen Suces.....	29,979	17,474	16,626	8,700	72,779	3-7 969	170,028	111,682	22,710	698,389	25,280	7,200	5,200	—	37,760	808,978
Neale & Staats.....	—	—	—	10,100	10,100	196,188	50,558	37,237	34,960	338,952	144,350	34,880	30,180	44,820	254,230	603,282
Reeks & Astlett.....	194,609	36,124	40,905	108,361	380,089	—	—	—	1,680	1,680	—	—	—	—	—	381,769
B. A. Antunes & Co.....	17,458	14,191	5,647	24,237	60,533	184,280	40,539	31,310	39,210	295,339	—	—	—	—	—	365,863
Brookhurst & Co.....	25,114	3,868	5,424	—	34,406	132,285	31,921	51,036	87,282	302,524	1,900	292	240	150	2,588	339,514
Mello & Co.....	59,150	7,820	6,728	—	61,698	115,436	29,580	13,680	—	158,630	—	—	—	—	—	223,350
Marius & Levy.....	2,240	—	840	—	3,080	2,781	314	1,963	188	5,246	32,206	6,496	28,920	135,929	203,561	211,867
Kahn, Pollack & Co.....	—	—	—	—	—	5,650	480	2,160	—	8,330	108,262	24,698	42,653	1,064	177,267	185,597
Denis Crovan & Co.....	55,819	10,627	10,689	—	76,535	106	292	585	137	1,120	4,550	1,530	1,320	—	7,100	84,755
Marros & Levy.....	—	—	—	—	—	7,460	1,218	10,401	53,017	72,102	—	—	—	—	—	72,102
Schill & Sobrinho.....	—	—	—	—	—	—	—	—	—	—	34,534	6,312	11,905	967	53,718	53,718
Fretas Ferra & Co.....	—	—	—	—	—	24,960	4,800	4,770	13,351	47,880	—	—	—	—	—	47,880
Bernado Boekris.....	—	—	—	—	—	1,190	170	360	—	1,720	30,940	3,740	9,980	680	45,340	47,060
Sears Para Rubber Co.....	11,713	2,885	3,638	196	18,332	74,875	13,948	13,021	2,670	104,017	33,357	16,464	6,958	12,164	68,943	18,332
Sundry Shippers.....	97,561	24,525	16,930	17,714	157,160	—	—	—	—	—	201,403	19,489	119,927	282,347	623,165	330,120
Equitos, Transit.....	—	—	—	—	—	288,662	16,289	143,167	3,4707	802,825	—	—	—	—	—	1,428,990
TOTAL, 1902.....	3,763,070	1,045,578	1,011,049	1,073,633	6,893,339	3,607,134	741,269	789,593	1,297,112	6,435,208	803,498	191,740	299,530	519,792	1,814,548	15,148,095
January-June.....	2,012,754	559,423	628,162	977,857	4,178,166	2,119,664	458,672	540,030	978,827	4,096,593	443,343	141,500	205,806	258,496	1,144,145	9,418,934
July-December.....	1,750,315	484,155	384,887	95,776	2,715,143	1,488,070	283,697	249,563	318,285	2,338,615	360,143	50,240	93,724	166,296	670,403	5,729,161

OFFICIAL STATISTICS OF CRUDE INDIA-RUBBER (IN POUNDS)

UNITED STATES.				GREAT BRITAIN.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.	MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
November, 1902.....	4,717,111	243,928	4,473,183	November, 1902.....	4,141,872	3,752,112	389,760
January-October.....	41,290,317	2,816,661	38,473,656	January-October.....	38,779,776	26,096,336	12,683,440
Eleven months, 1902.....	46,007,428	3,060,589	42,946,839	Eleven months, 1902.....	42,921,648	29,848,448	13,073,200
Eleven months, 1901.....	50,096,293	3,478,559	46,617,734	Eleven months, 1901.....	47,629,792	29,943,536	17,686,156
Eleven months, 1900.....	44,307,247	3,548,362	41,758,885	Eleven months, 1900.....	53,716,208	29,899,520	23,816,688
GERMANY.				ITALY.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.	MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
November, 1902.....	2,548,920	1,167,760	1,381,160	November, 1902.....	246,840	—	246,840
January-October.....	27,540,920	11,475,640	16,065,280	January-October.....	1,162,700	107,360	1,055,340
Eleven months, 1902.....	30,089,840	12,643,400	17,446,440	Eleven months, 1902.....	1,409,540	107,360	1,302,180
Eleven months, 1901.....	26,237,640	10,042,780	16,194,860	Eleven months, 1901.....	1,317,580	207,020	1,110,560
Eleven months, 1900.....	27,706,580	9,794,620	17,911,960	Eleven months, 1900.....	1,435,060	—	1,435,060
FRANCE.				AUSTRIA-HUNGARY.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.	MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
November, 1902.....	867,460	784,960	82,500	November, 1902.....	217,580	220	217,360
January-October.....	13,277,000	8,326,340	4,950,660	January-October.....	2,179,320	13,320	2,166,000
Eleven months, 1902.....	14,144,460	9,111,300	5,033,160	Eleven months, 1902.....	2,396,900	12,540	2,384,360
Eleven months, 1901.....	14,525,060	9,071,360	5,453,700	Eleven months, 1901.....	2,371,380	25,080	2,346,300
Eleven months, 1900.....	13,792,200	10,057,180	3,735,020	Eleven months, 1900.....	—	—	—

NOTE.—German statistics include Gutta-percha, Balata, old rubber, and substitutes. Italian, French, and Austrian figures include Gutta-percha. The exports from the United States embrace the supplies for Canadian consumption.

AND
TAL.

250,334
317,167
386,423
808,928
603,282
381,769
355,863
339,518
223,380
211,887
185,557
84,755
72,162
53,718
47,880
47,060
18,332
330,120
428,990
1,143,065
9,418,934
5,724,161

18

CABLE ADDRESS.
"GUTTAPERCH, TORONTO."



H. D. WARREN, PRES. & TREAS.
C. N. CANDEE, SECY.

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"Kelly-Springfield" Solid Rubber Carriage Tires,
"Maltese Cross" Carbolized Rubber Fire Hose,
"Eureka," "Paragon" and other High Grades Cotton Fire Hose.

"Maltese Cross" and "Lion" Brands Rubber Boots and Shoes.

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J. H. McKECHNIE, Gen'l Mgr.

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THE CANADIAN RUBBER COMPANY

OF MONTREAL.

CAPITAL, - - \$1,500,000.

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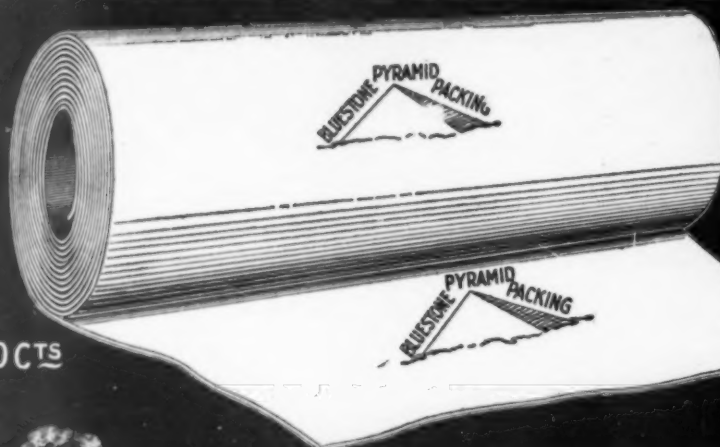
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PYRAMID BRAND BLUESTONE HIGH PRESSURE PACKING

FOR STEAM &
HOT OR COLD
WATER &
AND AIR &
PACKS EQUALLY
WELL FOR ALL
PRICE PER LB. 80 CTS



THERE IS NO
PACKING MADE
THAT WILL LAST
AS LONG OR WITH-
STAND AS WELL
THE ACTION
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